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## BOOK OF INDIAN ERAS.

## B O OK

OF

# I N DIAN ERAS, 

FITM

TABLES FOR CALCDLATING

## INDIAN DATES.

BY

ALEXANDER CUNNINGHAM, CS I., C.I.E., major general, boyal englneers (bengal)

[^0]
## ORIENTAL PUBLISHERS DELHI-6

## PREFACE.

Most of the Tables in this Book were prepased for iny own use so far back as 1859 I had long felt the want of some handy and ready means of calculating Indian dates, ns the process described in Warren's Kala Sankâlita and Punsep's Useful Tables ss both cumbrous and troublesome It struck me that, by substituting decimal parts of days for the Hindu gharre, palas, and vipalas, and by lesseming the number of items to be taken out from the tables, the process would be made much more easy The road in both is the same, but I believe that I have made it both ahorter and amoother The best test, however, of the advantage of my process will be to compare it with one of Warten's own examples for finding the mitial day of both the Solar and Lum-Solar Calendars for the year of Kâl-Yuga 4923 complete $=$ A.D 1822

The following is my process
solar ahargana luntsolar ahargana
Surya Suddhânta, Tablo XII
4900 years $=1789,1689067$ days and
Surya Suddhânta, Tablo XIII




53,6176974
Dd 1800 Lanations 53,155 00̈82

Table XIV
4626392
Dd 15 Lunations
4429587
Conjonction 196805 or 20 days earliar $=$ Satarday, 23rd Maroh Beginning of Luni-Solar jear 1 day leter $=$ Sandiny, 24th March

The following ${ }^{1 s}$ Warren's process See his Kâla Sankalita, p 240, and Tables, pp 65 and 66

Wanted the begnning of the Solar ycar 4923 Kâli-Yuga, wecording to the Surya Siddhênta-

| Years | Days | $G$ | V | P |
| :---: | :---: | :---: | :---: | :---: |
| 4000 | 1461,035 | 1 | 33 | 20 |
| 900 | 828,782 | 52 | 51 | 0 |
| 20 | 7,305 | 10 | 30 | 28 |
| 8 | 1,098 | 51 | 29 | 22 |
|  | $\xrightarrow{\square}$ | - | - | - |
|  | 1798.168 | 51 | 29 | 22 |
| Subtract Sodhyam | 2 | 8 | 51 | 15 |
|  |  | 42 | 38 | 7 |
| Divided by 7 | 1798,166 | 42 | 38 | 7 |
| Remainder |  |  |  |  |

which, counted from Finday, gives Suta-dina=Thursday
[NB—Here Thursday is a misprint for Fruday, as the large fraction of a day, upwards of 42 ghares, or more than twu-thrrds of a day, is practically a whole day, so that the remander of 6 days +42 ghams is reckoned as 7 days, as noted by Warren himself on page 65 at the foot of Example II, where he states that by the Surya Siddhanta the mitial day is Finday]

Warreu's Luni-Solar example is on page 66 of bis Tables
Wanted the beginning of the Luni-Solar year 4293 Kâlı-Yuga, according to the Surya Siddhânta-


In the tables for finding the corresponding dates for any Hijra day I believe that I have made the process move certan as well as more easy, by the adoption of a table, No XV, showing the number of each day in the Muhammadan year By this means the corresponding Christian day of any Muhammadan date can be ascertannted with sbsolute certainty in a few minutes

The tables connected with the Christian year appear to me to be much sampler than any others that I have met with I piepared thein for my own use in 1859, and I have since had so many oppoitumities of testing their accuracy as well as therr easy working, that I have no hesitation in putting them forward as really useful and handy Tables

For the Tables of the Seleukidan era, I must ciave some indulgence, as the subject is one of much difficulty, partly owing to the meagieness of trustworthy data, and partly to the adoption of the Julian reckoning in the western half of the Syio-Macedonian Empie aftel its annexation to Rome As my object is to tieat of Indian eias only, I have retaned the use of the cycle of Meton with its embolismic months, as I feel quite satisfied that the Julian leckoning was never adopted in the eastern provinces subject to the Bactrian Grecks and Paithians

The present wosk differs from others on the same subject, not only in the greater completeness as to the number of cras tieated of, but also in the greater haudiness and simplucity of ts Tables for calculation I believe, therefore, that this "Book of Indian Eias" will help to supply a want, which has long been felt, in its numenous tables for the calculation of any Indian dates by easy and simple processes

The most useful woiks on Indian Measuics of Time that I am acquanted with, ale the following -

Warren's Kala SankSlita, 1825<br>Jervie's Weightm, Mewures, and Colar of India Prineep's Useful Tables, $183 \pm$<br>Cowesjee Patell's Chronology, 1866

Colonel Warren, who belonged to the French family of De Warenne, was one of the officers of the Great Tiggonometrical Suivey $H_{1 s}$ work gives an elaborate exposition of the Hindu solai and lunt-solar measures of time with an account of the Vinhespati Chakia, or Jupiter cycle of sixty years, and a memoir on the lunar year of the Muhammadans At the ond he has given a series of very useful tables for faclitating the computation of Indian dates The Kala Sankalita as valuable for its accuracy, but its Tables are rather cumbrous and tioublesome for any Jarge number of calculations My own Hundu Tables ase sumpler and
easien to work with than Warren's, but they are essentially the same, aud were, in fact, based upon his elsborate and more cumbrous processes

Jeivis's Measures of Time form only part of his large work on Indian Weights and Measures His Muhammadan calendar is excellent; but his list of the corresponding years of the Vikramaditya Sanbat is entirely vitiated by his adoption of the wiong initial point of the era as 56 BC , instead of 57 or $56 \frac{3}{2} \quad \mathrm{H}_{1 s}$ account of the 60 -year cycle of Jupitei 19 limited to the corrupt form in use in Southern India

James Prinsep's Useful Tables are founded alanost entirely on Warren's Kâla Sankâhita But his tabular forms are much more handy than those of Wairen, and his calendric scales foi ascertaining corresponding dates by simple inspection are a really useful invention. For lus own use he hadw ooden cylinders prepared round which the scales were pasted, so that the initial day of any Hindu or Muhammadan year could be set at once to its corresponding date in the Christian calendar. There are several misprints, but the only selious one is in the table of Hindu sidereal years, where the mitial days of the Christian years on the left hand from AD 1753 onwards are continued in Old Style, while the initial days of the corresponding Hindu years are given in New Style right down to the end Thus the present year AD 1882 is made to begin on Friday (which 18 OS ), instead of on Sunday (NS ), while Tuesclay the loth April is given as the beginning of the Hindu year in NS

Cowasjee Patell's Chronology $1 s$ an extremely useful practical work, as it gives a large number of coiresponding lists of jears of different eras "in use among Parsis, Jews, Greeks, Hindus, Muhammadans, Chinese, Japanese, \&uc The bref accounts of the eras are generally taken from Prinsep, as well as the rules for calculating the dates The Tables are singularly free from misprints, but whilst I was salculating my own Tables and comparing them with his, I found the following errata, which may be worth noting by all those. Who possess a copy of his work

In A D 141 and again in AD 543, the name of the intercalary munth has been owntted

In AD 999, for 19th March, read 21et Merch<br>————1168, for 15th March, 1 oad 12th March<br>————1169, for 4th March, 1 tad 1 st March<br>——— 1344, fur 15th Maroh, , ead 16th Maroh<br>——— 1597, for 7th April, read 7th March<br>—— 1655, for 26th Februsry, road 28th March.<br>——— 1889, for 1ot April, road 11 th April.<br>$\longrightarrow$ 1883, for 15th April, road 13th Apnil.

A very curnous coincidence of dates came accidentally to my notice
duning the past cold season At Boram Dco in the Cential Provinces I found several inscribed Sati Pillars, two of which gave the name of the year of the 60 -year cycle of Jupiter in addition to the Samvat date These two inscriptions are recorded as follows -

> A - Swarti Samvat 1430 gamayo
> Sudharthi nama Savachhara
> B - Samvat 14f; Bhuva nama
> Samvatsara Aukina bads i3 Some

As Boram Deo is in Chattisgarh or Mahâ Kosala, which former the old kingdom of the Chedis or Kalachuis, 1 thought it most probable that these dates were reckoned in tho Chedi on Kalachun Samvat of which the initial point, as $\mathbf{I}$ have previously shown, was A D $249=0$ Reckoming from this starting point, the date of A would be $1430+$ $249=1679$ A D, which was actually the year Sidbâithi, according to the computation of the cycle in use in Southern India

Similaily the datc of B would be $14 \div 5+249=1694$ A D , which was actually the year Blâva of the Southein reckoning

Here then I thought that I had found a clear proof that the Cheds or Kalachuri era had continued in use down to AD 1694 But when I proceeded to calculate the week day of B, I found that at did not agree with AD 1604 It then struck me that the Samvat might be that of Vikramaditya, according to which the date of $A$ would be $1430-57=1373 \mathrm{AD}$, which to my surpuse proved to be also the yeat Sidhârth of the Northern reckoning of the 60-year cycle Similaily the datc of $B$ would be $1445-57=1383 \mathrm{AD}$, which was also the yeai Bhâva of the Noithein reckoning On calculating the week day of $B$. I found that it agreed exactly with the Vikiamêditya Samvot, as the 13 th of Aswina-badi in Vik Sam 1445 was actually a Monday Without this mention of the week day, the truc equivalent of thesc two dates would, therefore, have been doubtful, and I should ceitainly have been melined to 1 efer them to the Chedi era

Of course, this conncidence could only happen within the limit of the $86-y$ ear period in which those two dates arc meluiled, as the omission of every 86 th name of the Jupitci Cycle in the Northein reckoning would make all the carlier northern names latc, and all the latter oncs earlier

Since the text of this book was printed, a notice of my attempt to fix the date of the Gupta era has been published by Dr Thibaut, Principal of the Benares College* His lemarks are confined to the calculations

[^1]based on the I2-year cycle of Jupiter, as he considers it highly probable that the modern system of Hindu astronomy, with its farly accurate knowledge of the planetary revolutions, "was not well established before AD 400" This I fully admit as fai as the existing Siddhântas are concerned But the fact that the Macedonian montlis wete in use in Noithein India, certanly during the lst and 2nd centuries AD, offers, in my opimion, a clear proof that the people of Noith-Western India had adopted the Macedonian era of the Seleukidæ Now the Grecks of Alexander's army must have brought with them the calendal of Meton, which was a lumi-solar cycle of 19 solai years of $365 \frac{1}{2}$ days each, or 235 lunar months* But this 18 the vely cycle that $1 s$ still used by the Hindus themselves, and I have very hittle doubt that they must have corrected the old erroneous reckoning of Garga by the Gieck calendar of Meton

If this conclusion be right, then the Hindus of the lat and 2nd centuwes A. D must have had a nearly accurate knowledge of the length of the solal ycar, the amount of error being only one day in 76 y ears It seems to mo, thecefore, not improbable that a fanly accunte allaptation of the cycle of Jupiter to the reckoning of the solar year may be as old as the time of the Indo-Scy thians, who made use of the Macedonian calendai in theil msenptions Of course tlus is not a proof that the reckoning of the Aryand Surya Sildhântas was in use at so early a peitod Butit is, in my opinion, a vely strong argument that a nearly accinate seckoning must alteady have been adopted

I am peifectly aware that the date of the Gupta cra is still unsettled, but there $1 s$ one fact that is strongly in favour of the early period that I have arrived at,-namely, the date of AD 319, which is assigned by Abu Rihân for the extinction of the Gupta domimion Now the last of the gieat Gupta kings was alinost certanly Skanda Gupta, and as we have a copperplate inscription dated in the year 146, during his ieign, the initial point of the era cannot well be placed later than $319-146=173$ A D , that $1 s$ within seven years of my proposed date $I$, therefore, adliere for the prescnt to the year 166 AD as a convenient date, which cannot be far from the truth In fact the two inscriptions of King Jaika, if they belong to the same person, are very strongly in favour of my date One of these is dated in the year 794 of the Vikiamâditya Samvat, or A D 737-38, and the other, from Morbi, is dated in 595 of the Gupta eia Deducting 595 from 738, we get the yeai 143 AD, which 1823 years ealler than my date But if we accept my date as a near approxination to the truth, we obtain $166+595=761 \mathrm{AD}$, as the date of the

[^2]Morbi mseription, which would give King Jaika a reign of 23 years fiom 738 to 761 A D *

In Table XVIII I have added a list of echpses, both lunar and solan, from the beginning of the Chistian era down to AD 2000 These have been taken from the celebiated Fiench work "L'Art de verifier les dates"-_Vol I, 8vo, 1818 In the orgganal woik the hour of each echpse is given for the mendian of Pails These I have omitted for want of space While copying out the dates, I have noted a few errors and omissions, namely -
A. D 13t1, for Lanar Eohpee, 13th May, read 3Ist May

A D 1392 for Lunar Echpse, - Sept, had 2nd Sept
AD 1488, far Solar Eclipse, 9th July, 1 ead Lunar
AD 1916, for Lunar Echpse, 8th January, 1ead 18th
To show how easy it is to make mistakis in dates, it will be sufficient to state that the Emperox Babber has given the wiong date for his own famous battle of Kbânwa, in which he defeated Râna Sangrâm of Mewâr Balier says that it took place on Satuiday, the 13 th of the second Jamâlı, A H 933, which both Eiskine and Dowson make the 16th March AD $1527 \dagger$ That the name of the week day $1 s$ correct we learn fiom Shekh Zein-uddin, who repeats the name in the following quotation from the Korân "Since God has given a blessing on your Saturday" But tho 13 th of the second Jamâdı was a Sunday as wall bo seen from Bûbery own statements of othet dates in the same year Thus he calls-

| 24th Muharam | 993 |  | Wudnesday |
| :---: | :---: | :---: | :---: |
| 15 th Safar | " |  | Wednesday |
| 16th Rabs I | " | - | Fiuday |
| 9th Jamadı I | " |  | Monday |
| 14th | " |  | Satuday |

All of these dates bring us to Monday as the 30 th or last day of Jamâdi I, and to Tuesday as the lat of Jamadi II Consequently, Suturday was the 12 th and not the 13th of that month-a fact which has escaped tho notice of both Elskine and Dowson

With reference to the intercalary months of the Hindu lum-solar year, I may mention that there is a great divergence between the published lists of Jervis and Cowasjee Patell $\ddagger$ At page 91 I have quoted the native rule as given by Warren and Pınsep, and the following example will show that the table pubhished by Jervis 19 certunly wiong

[^3]In the Saka yeal 1091, or A.D 1168, the month of Srâana was intercalaity as recoided in an inscription of Vyaya Pandya Deva* At that date the luni-solar year began on the 1st March, and the solar year on the 24th March The 23rd March was, therefore, the 31st day of the solar month of Chaitra, and the 1st March was the 8th day of the solar Chattra Now, accoiding to the native rule when the luni-solar year begius on the 6th, 7th or '8th of the solar month of Chaitra, then the month of Srâvana will be iutercalury Tuining to my Table XVII, page 175, it will be seen that in the year A D 1168, or Saka 1091, the month of Srâvana was intercalary That it was an intercalaiy year is proved absolutely by the initial date of the following year Saka 1092, which is 20 days later, and therefore the year 1091 just ended must have consisted of 13 lunar months

But Jeivis makes the year 1091 Saha a common year, and assigns the intercalary month of Srâvana to the year 1003 Saka. The Patell's year of intercalation are correct, and so also are his names of the intercalary months so far as I have had leisure to test them

ALEXANDER CUNNINGHAM

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## ERRATA

Page 7, line 22, for 'Kalh-Yuga,' read "Kalz Ynga,' and the same correction in other piacon.
Page 25, No 49, for ' Sanmya,' road 'Sananya'
Page 42, inne 2, for ' $165-164$,' read ' 166 -165 ${ }^{\text {' }}$
$\longrightarrow$, line 10, for ' $165-164$,' read ' 166165 "
———, line 11, for '161-160,' read ' 162-161'
———_, line 12, for ' 139-138,' reat ' 140-139'
———, Line 13, for '129-128,' read' '130-129'
Page 58, line 24, fon 'any,' read 'my'
Page73, line 2 insert ' $Z$ uru,' after 'Dhamma'
—_, line 19, for ' 1929 ' read ' 1029 '
Page 83, line 23, for 'Snah,' read 'Sanh '
Page 86, hne 36, for ' of the jear,' road 'to the jear'
Pago 164, opposite A D 820, intert, in Jet aud Jrd colnmen of Jupitar Cyeles, two black circles, to ehow that two names havo been omitted
Page 168, opposite A D 945, in oolumn 3, for '29;' real ' 22 '
Page 169, opposite A. D 972, in column of mitial days, for 'T" 19," raad " Mo 18 '
——_, opposite A D 974, far ' Mo 26 Fob' read ' 77 '
Page 186, opposite A D 1496, fer' We 16 Mar 'read 'Tu 15 '
Page 224, hne 2, should read " m whuch each year has a separnte name"
$N B$-Page 45-add at foot
If the correotion of Kallippus of 1 day in 76 years had been adopted by the Selenkudm, then tho year 2 of thoir era would have begun on the 2 nd October 312 BO , and every suoceeding 77 th year wonld also have begun on the eame day of the oorreaponding Christian year Thas the following gears of th3 Seleukidan era would all have begun on the 2nd Ootober -

| An Sol | 1, | 77, | 153, | 229, | 305, | 381. | 467, | 533, | 609 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| In B C | 312, | 236, | 160, | 84, | 8 , | A 1 69, | 145, | 221, | 297 |

The fact that the battle of Arbela was fought on the 2nd October 331 BC , near the end of the month of Gorpimns, shows that the Maoedouans of Alexander's army had not adopted the correated Calendar of Kallippus, otherwise the 2nd of October would have been the lat of Hyperberetseas
$\boldsymbol{N} \boldsymbol{B}-\mathbf{P}$ 95-add the following paragraph -
When the given date falls in an intercalary jear after the intercolary month, then 30 daye must be added to the number of days given in Table $X$ Thus, if the given date should be 10th Mégha-sudi and the year be an anteroalary one, 90 days mast be added to the number of 305 daye given in the Table, nnlees the intercalary month ehonld happen to be Phslguna, which being later in the year, would not affect the month of Magha

## BOOK

UF

## I N D I A N E R A S.

## ANCIENT INDIAN MODES OF RECKONING TIME

The natural divisions of time-years, months, and days-have, in all ages, been determued by the motions ot the sun aud moon In India the day was reckoned from fannse to sumise, the month, from one moou to unother moon, and the year, from the beginning of one season until its return

The moat ancient year probably consisted of 360 dayn, which a,prosimated roughly to twelve revolutions of the moon and onc of the sun In one of the hymins of the Iig Vola the sun's annual couise through the hearcins 19 descibed as han iwhosopolucd wherl* The 360 day 4 , with as many niglite, ane called his 720 childen In another part of the sane hymn the suns annual courve is somew hat differently described "The felloes are 12 tho wheel is 1, 3 are the asles within it aie col'ecterl 360 spokes " $\dagger$ Here the spohen represent the number of lays the asles are the three soasons of Heat, Rarn, and Cold, and the 12 felloes are the 12 months

But the great differenco of 11 days between 12 lunations and 1 revolution of the sun must soon have led to the establishment of the old cycle of 5 solar years and 62 lunations Taking the solar year at $365 \frac{1}{2}$ days, and the moon's revolution at $29 \frac{1}{8}$ days, the 5 solar years would have been $1826 \frac{4}{4}$ clays, while the 62 lunations would have been 1829 days The differenet of 23 days in the lustrum of 5 years would have made a yeuly difference of upwards of half a day The five years consisted of three ordinary years of 12 lunar monihs, and of two years, the 2nd and 5th, each with an interealary, or thirteenth month

[^4]This intercalary, or thirteenth month, is very plannly alluded to in the Rig Veda,* where Varuna is sad to know the 12 months, "and that which is supplewentarily engendered," or, as Dr Max Muller has it "He knews the 12 months with their offisping, and knows the month which is produced in addition " $\dagger$

Dr Max Muller also notes that, "In the hymns of the Yajur Veda the 13th month is changed already into a deity Oblations are offered (Vâjasan Sanhita, vil, 31) to each of the twelve months, and at the cnd one oblation 18 made to Anhasaqpati, the deity of the intercalary month, In the Brahmanas hkewise the thuteenth month 19 mentioned, and in the Jyotisha the theory of intercalation is fully explaned" It seems certain thereforo that the intercalary month was well known as early as the Vedic Period

Each year of this five-year cycle, or lustrum, had a separate name This umportant fact was first made known by Colebrooke from the Whie Yajur Veda The same names are alsu given by Vaiaha Mihira, who says $\ddagger$ "The first year of each lustrum, called Samvutsara, is (ruled by) Agni, the second, Parvatsarc, by the Sun, the thind, Iddeatsara, by the Moon, the fourth, Anuvatsina, by the Cicator, and the last, Udavatsara, by Rulra" But the passage in the Fajur Veda goes on to say "May mornings appertain to Thec, may days and nights, and fortizights, and months, and seasons, beloug to Thee" Here then we see that, as early as the time of the Yajui Verla, the whole system of lunar months, with thels hight and dark fortnights, and of intercalary months, to adapt the luval months to solar reckoning, had already been establushed §

We have another testimony to the early use of the lunar fortnights in a passage of Quintus Curtius, whose information must have been obtained from some ot the wisters who accompanied Alexander the Great \| "Their months cousist of fifteen days, but they keep the

[^5]full year They reckon time by the course of the moon, not as most people do, but by half-moons"

We also learn the same thing from the insci iptions of Asoka, which are about eighty years latel than Alexandel Thus in the serarate edicts at Dhauli we find mention of the month of Traya (Masi-cha Tise) of the lunar fortnght (athama palchayr, is the 8th day of the palesha), and of the three seasons (tzsu chatum-Maszsu, or the thee four-monthly periods) On three days the slaughter of anmals also is torbidden, namely, on the day of 'fullmoon,' punnamâsz (called also pannadasam, or the 15 th day), on the 14th day, and on the day after the conjunction.

The old ycar was divided into three seasons of Heat Rain, and Cold, called Ginshma, Varsha, and Hemantr,-all of which names are found in the Indo-Scythan inscriptions They are also commonly known as Dhup-kal, Barhha-kâl, Sît-kâl *o in Ceylon the rany season, or Wasso, still consists of four montlis, and extends from July to November In ancient times, however, Wusso on Varsha extended from June to October, but owing to the gieater leugth of the Indian year the seasons fall back about one day and-a-half in every hundred years At the present time che solar year begins on the 13th of April instead of on the 21 st of March In consequence of thas difference the beginning of Varsha, or the rainy season, in the times of Alexander and Asoka, would have fallen just one month earlier than at present

In the Indo-Scythian inscriptions fiom Mathura, the fortnights are not designated as light and dank or the waxing and the waning of the muous, but are numbered throughout earh season as the 1st, 2nd, 3rd, \&c, fortmghts of the hot, the ramy, or cold season Thus one of Vasudeva's inscriptions is dated in

Sam 83-Gr 2-D2 10
that is, Samvatsara 83, Grishma 2 Paksha, Duvxsa 10, or, "on the 10th day of the 2nd fortnight of Grishma in the year 83" But as the names of the Hındu months of Chaitra, Vaısâkha, Ashadha, and Sravana ale found in the Indo-Scythian inscriptions from Gandhatra, along with the Macedonian names of Dansios, Apellaios, ana Artemisios, during the reigns of Kanishka and Huvishka, it is difficult to say which of the

[^6]two systems of namung the lunal fortnights may bo the older I have a suspicion, however, that the indigenous nomenclature may have been by numbering and that the other method of waxing and waning fort-
 ф日ivourac

The oldest eras described by the astronomers are the Saptdishr-Kal, or cycle of the seven Rishis, the Barhaspatya-Mdnas, or sixty and twelve y ear cyeles of Jupiter, and the Kalı-Yuga, or legnnning of the Kâli-Age Not one of these mounts up to the exaggeiated periods of thousands of milhons of years like the monstrous ivctems invented by the astronomers The oldest of them, the Suptarsh-Kall, ascends only to B C 4077, on perhaps to 6777 BC , whle the Barhaspatya-Mana and the Kâli-Yugra reach only a little beyouil 3000 BC In Alexander's tıme the Hindus did not claim a greater antiquity than BC 6777 I have therefore a very strong suspicion that the present extravagant system of Yugas and Mahâyugas, Manwantaras, and Kalpas, was an invention of the astronomers, which they based on then newly-acqured knowledgo of the procession The problem was a smaple one Given the precession of 498 seconds, as determined by IIipparchus, the period of one rovolution though the whole errele of $360^{\circ}$ would be $26,024 \mathrm{~T}^{18}{ }^{18}$ years To obtain a whole number of years the fiaction was got ind of in the usual way by multiplying 26,024 by 166 , and adding 16 to the product, a process which gives a penod of exactly 4320,000 years, or just one Fuga

It may be objected that the Hindu astronomers did not adopt the precession of Hıpparchus But this wall not alter the case, as theur own determinations of the precession give precisely the same reault The precession fixed by Parâsara is 465 seconds, and that of Aryabhata 462 seconds Following the same process as before, we obtan for Parâsaia $27,870 \frac{1885}{85}$ years as the period of one revolution, and $28,051 \frac{18}{26} 4$ years for Aryabhata, both of which periods give the same whole number of $4,320,000$ years. Exactly the same result is also obtanable fiom the European piecession of 501 seconds, whieh gives a period of 25,868 ${ }^{4}{ }^{4}$ t years for one revolution, and a whole number of $4,320,000$ years

But if this be the true origin of the Hındu Yuga and the monstrous system of Mahdyugas, Manwantaras, and Kalpas, it follows that some other mode of luckoning must have been in use before the Christian ela Now the only parly eias used in Northern India, of wheh detarled accounts stall remain, are the cycle of the seven Rushis, the two cycles of Jupiter,
and the Kâlı-Yuga The Saptârshı-Kâl is unknown in Southern Indıa, but the Kih-Yuga and the 60-year cyele of Jupiter ale well known, bendes che two cycles of Para-uiana and Grahapmivithi, which are peculiar to Southern Inlia The elas of Buddia and Mahâvia, both of wheh are prior to Vikiamâlitya, must have been used ly the Buddhints and the Jains at an carly penod The former was certanly cuntent amongst the Buddhists in the tinno of Asoka, and the latto was pobably in use about the same peisod In the Mathura inseriptions of the Indo-Scythan kings, whech are found upon the statues of both Jains and Builhists, the dates are invariably expresed in au era which may have onginated with Kamishka, but which was most probably only an Iudian a loption of the Seleukıdan eta as suggested by Mr 'Ihomas

In dealing with Indian dates there is one fact that must never be forgoten, namely, that every year that is mentroned by number, that number rofers to years actually clapsed, just as Eusopeans reckon then ages When a man says that he is 30 yeass old, he meam htorally that 50 full years lave passed smee his buth, and that he as then m his ofat year So when a Hindu sceords the yuar 80 of the Vikrama Sanvat, or any other cra, ho muans that 80 full seans of that era have actually elapsed, and that the current year is the 81st

Only one inscription to my knowledge has yet been found dated in any of the intercalary months This is no doubt due to the entue want of festivals 10 these months, and as grants of land ase usually made on the festival days, thene are of counse few inscirptions recorded in the intercala, $y$ months

# I.-SAPTÄRSHI-KÂL ; 

on,

## CYCLE OF THE SEVEN RISHIS

The Sapt-Rwhi-Kal, or "Cycle of the Seven Rushis," called also the Saptdrshu and Sat Rulchu Kal, is so namod after the seven stass of the constellation of the Freat Bear It is the only mode of reckonng employed in the Râja Taranginn, or History of Kashmı, and it is still used in the hill states to the south-east of Kashmir between the Chenâb on the west and the Jumna on the east The general use of this cycle dud not escape the notice of Abu Rihan, who has preserved much valuable information regaiding the different centenary cycles in use at the time of Mahmud's invasion of Iudia
"In Indıa," he says, " the vulgar leckon by ages, and thrge ages follow one after another This they call the Scmeatsana of a hundied When one century as passed thcy drop at, and legin another They call this the Lok-Kal, or 'People's Era'" * Now this last 18 the same name that is used by Kaluana Pandit of Kashmir, who says $\dagger$

Lauhizebde chaturvinsate Sahahâlasyn sumpratam
Saptatyâtyadhıham yâtam sahcsram palvotsarah
> "The 24th year of the Laukika corresponds with the year 1070 of the Saka-Kal "

From this statement we learn that the year 1 of the Laukika comcided with 1047 of the Saka, or AD 1025, and as the cycle was a centenary one, the finst year of each century must have eorresponded with the 25th year of each Chistian century This is placed beyond all doubt by the following facts -

1 -In the Temple of Baijnath, in the district of Mand, there is an unscription which bears the two dates of Sake 726 and Lok-Kal 80 Deducting 79 from each date we obtain the Sakc year 647, or A D 725, as the first year of the Lok-Kal century

[^7]
## 2 -Captain Patrick Gerard of the Gorkha Battahon, then stationed

 at Kotgarh on the Satle, heads one of his notes as follows - "Kacha Sambat, or year 2, or 1826-27, Kotgarh, June 25th, 1826 " By thas aecount the yoal $182 \bar{a}$ A D was the first of the Kacha Sambat, or Sapt-Rishr-Kal, of 100 yearsI first became acquanted with the survival of this mode of reekoning in 1846, when I was employed in the Kangra distriet It was commonly called the Sat-Richr-Kal, but was also well known as the Pahdri Samvat, or "Hill era" In the same year I obtamed further information about it from Wazir Guadun, the astute inmister of the Mand state, who accompanied me to Ladâk Fiom him I learned to read the dates on the Sau Pillars of the Mandı Rânis Again, in 1859, on my return from Burma, I made new enquiries in Kashmir and Kângra, in Mandı and Kullu, as well as in Kotgarh and Rimpur on the Satej I then found that the Pandits of Kashmin still preserved the fanciful mode of leckoning the Lok-Kal, which was inventect by the astronomers, and afterwards adopted by Kalhana Pandit in the Rêja Tarangini All other accounts aguee in makng the Sapt Rishu cyele older than the Mahâhhâata But the astionomers differ altogether fiom the common opmon which has been generally adopted thoughout India According to the almost universal beltef of the people the period of the Gieat War, or the era of Yudhıshthira, was also the begınming of the Kâlı-Yuga That this was also the popular belref in former days is proved by the expheit statement of Abul Fazl," that "In the beginning of the fourth or present Yuga, Râjâ Yudhishthira was universal monarch, and the commencement of his reign became the epoch of an era, of which to this time, being the fortueth year of the reign, there have elapsed 4696 years" Now the fortieth year of Akbar was AD 1595, which, dedueted fiom 4696, gives BC 3101 as the penod of Yudhishthira as well as of the KaliYuga In another place also he states that the Mahêbhêrata was "carried on in the latter end of the Dwâpara-Yuga And in a third place he says that the wal happened one hundred and five years before the end of the Dwâpara-Yuga, and $4831+$ years before the fortheth year of Akbar But Abul Fazl had also heard of the date mented by the nstrunomers, aq near the close of his work he piaces the regn of Kansa, râjâ of Mathura, ' above 4000 years before the fortueth of Akbar," that is between 2400 and 2500 BC

[^8]On one point all accounts agice-namely, "that the Munis (or Scven Rushis) weic in Maghai when king Yudhishthira reigned over the earth" But the popular beluef assigis the same position of the Seven Rushes to be leginning of the Kali-Yuga also

According to the astronomers the era of Yudhishthirn varied from 600 to 606 yeara after the begnming of the Kâh-Yuga But their determinations depend on such groundless assumptions that they can only be looked upon as mere astronomical fancies Both Parâsara and Aryabhata assumc that the levolutions of the Seven Rishis began with the commencement of the Kalpa of 4,320000,000 years, and that the numher of ther revolutions in thes periorl was $1 ; 99,998$ But they differ slightly in the number of years elapsert before the begmong of the Kâlı-Yugn, which the fomer makes $1,972944,000$, whe the Jatter has 1,969 420,000 Acconiling to Paiâsara-
$\begin{array}{lllll}\text { A44320000,000 } & 1972944,000 & 1509,998 & 730,7190866\end{array}$
or $10,000 \quad 4507$
that 19 , at the lequming of the Kâli-Yuga the Seven Rishn, had aecompluhed 730,71 ) complete revolutions plus 0866 of a revolution Multipling tha fiaction by 2,700 years. os ond whole sevolution, we get years 2388200 of a revolution cxpired befor Kah-Yuga began Then as the Gicat War took place when the siern Jhalis were in Maghî (the 10th Nakshatia), we must deduct the 23382 from 900 , by wheh we obtain 66018 years of Kâli-Yuga expred at the date of Yudhishthira

By a sumilar process for Aryabhata, we get 6024 ycars of Kalt-Yuga expued as the date of Yudhinthra, and by repeatmg the process for Varcha Mihna, we get 653 Kâh-Yuga as hus date of the Mahâblârata The last is the date adopted by Kalhana Paudit, who says + "When 653 years of the Kâh-Yuga had espired, the Kurus and Pândavas flounshed"

This fanciful date avented by the astronomers 18 noticed by Abu Rihân as the Pându-Kâl, on "cra of the Pandus," which was different from the Kàlı-Yuga, but he omits to mention its starting point $\ddagger$

The theory of the astronomers is in ducct opposition to the explicit statements of the Purânas, which are in complete accord with the common belief§ Thus the Vishnu Purâna says -" When the first two

[^9]stars of the Seven Rish1s (the Gieat Bear) rise in the heavens, and some lunar asterism is seen at night at an equal distance between them, then the Seven Rishis continue stationary, in the conjunction, for a hundred jears of men. At the burth of Parikshit they were in Maghd, and the Kall-age then commenced, which consists of 1200 (divine) years When the portion of Vishnu (that had bcen boin from Vasudeva) returned to heaven, then the Kâh-age commenced "*

The Bhâgavata Purâna agrees with the Vishnu Puiâna in placing the Seven Rishis in Maghâ at the time of the Gieat War Thus Suka, addiessung Purihshitce, says "Of the Seven Rishis, two aie first perceived rising in the sky, and the asteriscu, which is observed to be at night even with the middle of those two stars, is that with which the Rishis aie united, and they reman so during a hundred ycars of mon In your time, and at this moment, they are situated in Maghâ'
"When the splendour of Vishnu, named Krishna, depaited for heaven, then did the Kill-age, durng which men dehght in sin, invado the woild Sulong as he contirued to touch the earth with his holy feet, so long the Kâlı-age, compising 1200 (dıvine) yeara, began" So also Nristuha "expounds the Sâkalya Sanhita, and rejects Vaiaha's rule as disagreeing wrth the Purânes" $\dagger$

Vaı aha himself quotes Vriddhs Qarga for his account of the cycle of the Seven Rishis $\ddagger$ His words are " 1,2 I shall tell, accolding to the theory of Vriddha Garga, the course of these Seven Seeis, by whom the northern region 1s, as it were, protected, though whom she shines, as if adorned with a sting of pearls, hike a madien with joyful countenance, wearing a wieath of white watcr-lilies, thrise Seven Seers, by the turning round of whom the northern region seems dancing, the pole-star being the regulator.
" 3 The Seven Seers were in Magh\& when king Yudhıshthira ruled the earth, and the penod of that kng 192520 years before the Saka era
" 4 They remain moving for a hundred years in each lunar mansion, and rise constantly in the north-east, together with Aiundhati"

[^10]$\ddagger$ Dr Kern'e Translation of the Brihat Senuita, 0 mili, $1 —$

Bat unluckily for Vardhe Mihura his commentator, Bhatta Utpele, has given us the very words of Garga, who simply says *
"At the junction of the Kalu and Dwdpara ages, the virtuous sages, who delight in protecting the people, stood at the asterism, over which the Pitis presido (that is Maghê)"

On comparing this quotation with Valaha's statement, we see at once that he has suppressed Gaiga's mention of the beginning of the Kali-Yuga to suit his own astronomical fancies Now Garga states most explicitly that the Scven Rishiss were in Maghâ at tho beginning of the Kâh-Yuga, and says nothing whatever about Yudhshthra But the fact that the Rishis were in Maghâ at the time of the Gieat War was too well known to be altered, and so Varâha accepts this, while he quiatly ignores Gaiga's statement about the Kall-Yuga Well might Nrisınha reject " the teachıng of Varâha as differıng from the Purânas"

The quotations which I have already given from Abu Rilian and Kalhana Pandit show that the fanciful vaganey of the astronomers regardıng the date of the Mahâbhêrata had already been partially adopted in the 11th and 12th Centunes $A D$ But the Jearned Mubammadan author goes on to show that the use of the Sapt-Rishi cycle had certainly extended to Multân and Sindh $\dagger$ He says, that " writers differ with regard to the beganning of the yoar as well as with regard to the initial point of the cycle" He states also that he has "seen the Indians, when they wished to mark the date of the taking of Somnâth, write down 242, 606, and 99, and then add them togetber, which gives the year of Saka Abu Rshan explans that 242 shows the number of years (of Saka) which preceded the epoch when the Indaans first began to use the centenary cycle, and that this usage commenced with the ere of the Guptas Further, that the sum of 606 shows the number of complete centenary cycles of 101 years each, and lastly, that 99 is the number of years elapsed of the current cycle" These numbers added together give 947 as the year of Saka in which Somnâth was captured, equivalent to the year beginaing in April AD 1025, and endung in April 1026, which 19 correct, as Somnâth fell in January 1026

In confirmation of the accuracy of this process Abu Rihần quotes the following formula from the astronomical tables of Durlabha of Multân - "Set down 848 and add the Lok-Kâl or vulgar reckoning, the sum will show the year of the Saka era" Abu Rihân then gives

[^11][^12]the following example -"Set down the actual date (year 953 of Saka in which ine was writing) of Saka, and deduct 848, the remander 105 will be the Lok-Kal, and the year of the fall of Somnath will be 98 "

In the first example, the capture of Somnath $1 s$ assigned to the year 99 of the Lok-Kal, and in the second example, to the year 98 but the latter is no doubt a mistake for 99

As the Lok-Kal of this descuption differs from that which has been un use for many centuries throughont Kashmen and all the hill states of the Punjâb and Cis-Sutlej distıcts, it appens to me eit'ier that the Lok-Kâl of Sindh and Multân must have had a different staiting point from that of Kashmir, or that Abu Rihân must have been puzzled by conflieting accounts which he obtaned from vanous persons who, perhaps, had but little knowledge of the subject The latter, I conclude, to have been most probably the case, as Abu Rhân candidly achnowledges the imperfectncss of his account and warns the reader that the results which he gives are uncertain, as several of the numbers (of the ceutenary cycles) exteed 100

The Lok-Kâl, or "common era," called also the Sapt-Rıshr-Kal, or "era of the Seven Rishis," is a cycle of 2700 years divided into twentyseven centenary peiods, a new reckoning being started at the beginning of each century The theory of the cycle 1s, that the Seven Rishis, or stars of Ursa Major, remain for one centuly in each of the twenty-seven Nakshatras, or Iunar mansions All authoritics agree in making Aswint the first of the Nakshatras, and in stating that the Mahâbhâratr took place when the Rushts were in the Iunar constellation Maghâ, the tenth of the series The Puidnas, and the practice of all the people who still use this cycle, excepting only the Kashmiris, agree in making the era of Yudhishthra the same as the Kall-Yuga All, however, agree in stating that, at the time of the Mahâbhârata, the Seven Rushis had already passed 75 years in Maghâ But as Varâha piaces the Great War 653 years after the beginnug of the Kîl-Yuga, oi in 2449 BC , that year should have been the 76 th of the tenth Nakshatra, and the 976 th year of the cycle This would fix the first year of each centenary penod to the 25 th year of each century BC , and to the 76 th year of each century $A D$ But to prevent the confusion that would thus have arisen, Varaba simply ignoied the generally accepted belief that the Rishis had spent 75 years in Maghâ when the Mahâbharata took place and retained the initial pointa of the Saptershi centuries-only bringing Muglid down
from BC 3177 (or $3102+75$ ) to BC. 2477 Accordingly, Varâha's followers place the intial point of the Vrihaspati Chakia in 3377 BC in Aswinl, so that each century begins in the 26 th year of each century of the Kali-Yuga exactly as Dr Buhler was informed This also accords with the statement of my Keshmiri informant that the Rishis had completed three revolutions less 25 years in the Dwâpara-Yuga before the Kalı-Yuga began, that is, their Chakra preceded the Kâh-Yuga by 275 years, equivalent to BC 3377 , o1 $3102+275$ years

The following is a translation of the roply which I received from the Brahmans of Kangra in AD 1859 reganding the Sapt-Rishu-Kal At the beginning of the Kalı-Yuga, the Seven Rishis (or Stars of Ursa Major) had been 75 years in one Nakshatra (Magha), and they remanned in the same for 25 years longer These 25 years are the amount of difference between the total number of Kali-Yuga years elapsed and the number of centuries or years of the Hill cycle [Pahdir Samvat] up to the present date Thus the present year, 1859 of the Christian era, is Kali-Yuga 4960, and 35 of the 50 th Hill cycle, or exactly 25 years short of the number of Kall-Yuga years"

From another informant I received the following account -" The Seven Rishis reman for one hundred years in each Nakshatra They entered into Maghâ 75 years before the beginning of the K飣-Yuga, and they remaned in Maghe for 25 years of the Kâlı-Yuga," that is untsl 3077 B C., when they entered into another Nakshatra

Simular information was received from the Biahmans of Mandi and Bisahar. But from Kashmir the reply was somewhat different. It was obtained by Mirza Saifuddin after consultation with pandits and astronomers "The present year 1859 is 4960 of the Kali-Yuga, and Samvat 35 of the Haft Rikheshar The Kali-Yuga is sadd to be 25 years in advance of the Haft Rikheshar The seven atars complete one revolution in each Nakshatra in 100 years When they had completed thiee revolutions less 25 years in the Dwapara-Yuga, then the Kâli-Yuga began, and only 2425 years of the first Chakra belong to the Kalı-Yuga Each whole period of 2700 yeas is called a Chakpa, or cycle, in which the Seven Rishis pass through the 27 Nakshatras from Aswini to Revati. Of the mecond Chakra of 2700 years 25 Nakshatras were completed in the Christiau year 1825, or 4926 Kall-Yuga" This tallies exactly with the information lately obtaned in Kashmir by Dr. Buhler, who writes. "I have found in the manusar!pt several more dates in the Saptrishi
cra with the thousands added, and all agiee with the verse which plaees the beginning of the era in Kall 26, Chaitra-sudi $1 "$ In these accounts from Kashmil the eomputation of Varâha Mibira is adopted, which places the era of Yudhishthra in 653 of the Kâli-Yuga, when the Seven Rishis are said to have been in Maghâ, in ducet opposition to the eommonly recelved ieckoming which places the era of Yudlushthira at the beginning of the Kâli-Yuga

The infommants in Kangra, Mandi, and Bisahar agreed with the Kashmir coriespondent in fixing the begomming of the yeal at the noratra, on new moon of Chaitia, that is Cliartra-sudi 1

So muversal is the belief that the date of the Kall-Yuga is the same as that of the Mahaibhârata, that the native almanaes state it as a positive fact Thus Piofesso Bhândârkar quotes the following from an ordinary Eindu Panclianga of Bombay "In the Kain-age there ase six founders of eias Fist, there was Yurhishthira in Indiaprastlia, whose era lasted for 3044 years The second was Vi'srama at Ujayanı, whose cra had a iun of $13 j$ years The thild was Saluîhiana at Pıatısthâna" Here the era of Yudhishthira is made the same as that of the Kâl-Yuga which also dates fiom 3044 ycars before the ran of Vikiamn

The first mention of the Lok-KAl, or cycle of 100 years in the Raja Tarangini, is the year 89, corlesponding with AD 813-14 Before this period only the lengthe of 1 eigns are given, but from A.D 813 downwards the date of each king's death is earefully lecorded, with the name and day of the month as well as the year of the cycle

I have been thus particular in pointing out the true beginning of each century period of the Lok-Kâl or Snpt-Rishi Cliahra in the year 25 of each Christian centuiy, because both Tioyer and Wilson, after translating correctly Kalhan's statement that the ycar 24 of the Laukuka conncided with 1070 of the Saka (or AD 1148) have most delaberately and unaccountably thrown over the native haturian's statement and adopted some fanered dater of then own Thus the 8 nth year of the Kashmirian cyele, which, as we know from the Baijnath msemption as well as from Kalhana hımself, corresponded with A I) 813, Troyer refers to AD 816, and this error of thee years pervades all the dates throughout, the first six books of his translation So also Wilson's Chionology of Kashmar is throughout twenty-one years in advance of the true dates How all this happened I eannot even guess, but can only repeat the old saying "alnquando bonus dormitat Homevus"

The astronomers have been much puzzled to account for the alleged centennal motion of the Seven Rishis from one Nakshatra to another, which they admit is not visible to the human race Thus the commentator Sridhara Swâm explans, that "the two stars which pise first are Pulaha and Kratio, and whichever asterism is in a Lne south from the middle of those stars 18 that with which the Seven Rishis aie united, and they so reman for one hundred years" Other explenations are cited by Colebrooke, who closes his account with the opinion of Kamalakaia, who observes, that " no such motion of the stars is peiceptible Remarking, however, that the authority of the Puranas and Sanhutds, which affirm their revolution, is uncontroveitible, he reconcules fanth and expenence by saying, that the stais themselves are fixed, but the Seven Rishis are invisible deities, who perfoim the stated revolution in the period specified" *

The mythologists, however, give a different explanation According to them the Seven lishis, having given otfence to then teacher in the Satya-Yuga, were cursed by him and condemned to spend the remander of their lives as antelopes, wanderiug from one Nakshatra to another every hundred years Heuce they were named the Sapta-Minga, or "Seven Autelopes" This name recalls the Septem Trones of the Romans Some say that the Rishis were doomed to take the shapes of dufferent anmals every hundred years

But however obscure may be the ongin of the cycle, there is no doubt about its antıquity, as both Varâha Mihira and Bhattotpala refer to the description of it given by Vriddha, Garga, whose date is fixed by Dr Kern to the first centuny BC By his account the cycle must have been in use bofore the beginning of the Kâlh-Yuga, as he notes that the Seven Rishis had then passed 25 years in the Nakshatra or Lunar aster1sm of Maghâ Then as Maghà was the 10 th of these asterisms, the beginning of that Chakra or cycle of 2700 years must be dated back by 975 years to BC 4077 But the genealogtral lısts of the Puinas point to a still earlier period, as they place Krishna in the 52 ad generation after Biahma Allowing twenty-five ycars to a generation tho Hindu date of the creation would be thrown back by upwards of 1300 years before the Kall-Yuga, on to B C 4400

On referring to the nccounts of ancient India handed down to us by Alexander's companions, I find a curnous statement which seems to bear directly on this question of the starting point of Indian clironology

[^13]The statement is pieserved by Pliny, Solinus, and Arıan The first says, "Collıguntur à Libero Patre ad Alexandrum Magnum reges eorum CLIV, annis sex millia CCCCLI adjuciunt et menses tres,"-that 1s, "they reckon from Bucchus to Alexander the Great 154 kings, who reigned for 6451 years and 3 months" As Alexander entered the Panjâb in 326 BC, and left it towards the end of the same year, this account fixes the starting point of Indan chronology to the year $6451 \frac{1}{4}+326=6777$ BC.

Now it is a curious comedence that if another Saptarsh Chakra of 2700 years be added to 4077 BC , or the beginning of the Chakia indicated by Vriddha Gaiga, the initial yeal will tall in 6777, the very year which was satd by the Indians of Alexander's time to be the initial point of their history This comendence is certanly very remakable, and as it is the result of the addition of such a large period as 2700 years, it would seem to point to the conclusion that so early as the time of Alexander the Saptarshe Chakna of 2700 years was the common mode of Indian reckoning This indeed has already been mfered from the statement of Vriddlia Gaiga himself

The reckonang of the Lok-Kâl, as now used on Kashmar and the other hall states, is by the common lum-solar years beginning on Chaitrasudi 1, or the new moon of Chatre The cycle consists of 27 centuries, each counting from 1 to 100 years, when a new reckoning is begun. The first year of each century corresponds with the 25 th year of each Christian century Accoiding to Abu Rinân tbe people of Multân had only recently adopted the Kaslimiri reckoning from Chaitra, while in Sindh and Kanauj they still reckoned the yeal from Mankhir (that is from Margasiras or Agrahayana) *

For ascertaining any dates recorded in the Lnk-Kal the corresponding year of the Kâl-Yuga must be obtaned fiona the General Table, and the calculation must be made according to the rules laid down for the lumi-solar calendar In the Reja Tarangini the years are always mentioned by their numbers, and so they are in the Baljnath and Mandi inscriptions But the name of the century, which should be that of the Nakshatra, 18 never given

In Abu Rihan's account of the centenary cycle, there are several discordant numbers which I find it difficult to reconcile He states that when the Indians wished to note the date of the taking of Somneth[January 1026 A.D], they set down the figures 242,606 , and 99 , which added

[^14]together gave 947 of the Saka era [equivalent to AD 1025-26]. He explans tho numbers by referring 242 to tho number of years which had passed before the Iudıans began to use the centenary cycle, which came in with the era of the Guptas* In a previous passage, however, he makes this period only 241 years The figure 606 indicates the number of complete centuries (counting 101 years to each century), and the last figure 99 represents the number of years olapsed (éconlees) of the current cycle Now it seems to me that Abu Rihân has not properly understood the number 606, which I would explain as follows The unt 6 seems to me to refer to the penod which had elapsed between the establishment of the so-called Guptr era in AD 319, and the beginuing of the centenaly reckoning in AD 325 According to this explanation, the account will stand thus -

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A D 78 79, establiahment of the Saka era
    241 pears
    315 estabhshment of the so-called Guptix erm
        6 \text { interval}
    325 begruning of the contenary cycle
    C00 years elapeed
    925
    99 years of carrent cycle elapsed
    1024-25 A D
```

But as the 99th year 19 sadd to have elapsed (éconlee), the carrent year of the cycle would have been 100 and not 93 Accoidingly, tho year A D would havo been 1025-26, which is correet, as the fall of Somnath took place in January 1026

The following table will be of use in showing at a glance the initial year of cach century, as well as its Nakshatia or Lunar asteristu according to the different reckonings of Viddha Oarga and the Purânas on one hand, and of Varâha aud the later astionomers on the other The numbers placed aganst the names of the asterisms show the number of each century, while the beginning of the Chakra, or complete cycle of 2,700 , is indicated by the No 1 placed against Aswin Thus, on the left hend, it will be seen that the cycle of the commonly seceived account began in the years 6777,4077 , and 1377 BC , and in 1325 AD , whle those of Varâhe Mihra's reckonnng began in 3377 and 677 BC By the former it will be seen that the Seven Rishis were 10 Maghe between 3177 and 3077 B C, that is in BC 3101 at the beginning of the Kâl-Yuga, while by the latter, they are placod iu Maghâ just 653 years later, between BC 2477 and 2377, that 1s, in B C 2448

[^15]|  | Acoording to Vriddha Gargu and the Purdines | LOK-EAL,OrSAPTARSBI OYCLEInitial yesrs of Centaries |  |  |  | Acoording to Varelha Mihira and the later Antronomers |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $B \mathrm{C}$ | B C | B 0 | A D |  |  |
| 1 | Aewini | 6777 | 4077 | 1377 | 1325 | U Ashadha | 21 |
| 2 | Bharenı | 6677 | 3977 | 1277 | 1425 | Sravana | 22 |
| 3 | Kritticâ | 6877 | 3877 | 1177 | 1520 | Dhamiehtha | 23 |
| 4 | Rohmi | 6477 | 3777 | 1077 | 162: | Satabhiah6 | 24 |
| 5 | Mrigasiras | 6977 | 3677 | 977 | 1725 | P Bhadrpadî | 25 |
| 6 | Ardra | 6277 | 3577 | 877 | 1825 | U $\longrightarrow$ | 26 |
| 7 | Panarvasu | 6177 | 3477 | 777 | 1925 | Revatil | 27 |
| 8 | Pushy ${ }^{\text {a }}$ | 6077 | 3377 | 677 | 2025 | Aswing | 1 |
| 9 | Aslorh ${ }_{\text {a }}$ | 5977 | 3277 | 577 | 2125 | Bharami | 2 |
| 10 | MAGHA | 8877 | 8177 | 477 | 2225 | Krittizà | 8 |
| 11 | P Phalguni | 5777 | 3077 | 377 | 2325 | Rohinı | 4 |
| 12 | U | 5677 | 2977 | 277 | 2425 | Mingasiras | 5 |
| 13 | Hesta | 5577 | 2877 | 177 | 2525 | Ardrá | 6 |
| 14 | Chitras | 6477 | 2777 | BC 77 | 2625 | Punarvan | 7 |
| 15 | Switi | 5377 | 2677 | A D. 25 | 2725 | Panhyâ | 8 |
| 16 | Visalkhis | 6277 | 2577 | 125 | 2825 | Anlesht | 9 |
| 17 | Anuradhe | 5177 | 2477 | 225 | 2925 | MAGHA | 10 |
| 18 | Jyeahtha | 8077 | 2377 | 325 | 3025 | P Phalgra | 11 |
| 19 | Mala | 4977 | 2277 | 425 | 3125 | U | 12 |
| 20 | P Ashidhe | 4877 | 2177 | 525 | 8225 | Hestis | 18 |
| 21 | U | 4777 | 2077 | 625 | 3325 | Chitra . | 14 |
| 22 | Gravana | 4677 | 1877 | 725 | 8425 | Swati | 15 |
| 23 | Dbanishthi | 4577 | 1877 | 825 | 3525 | Visalkha | 16 |
| 24 | Satabhieh | 4477 | 1777 | 825 | 8625 | Anuradha | 17 |
| 25 | P Bhadrpades | 4877 | 1677 | 1025 | 3725 | Jyeshthe | 18 |
| 86 | $\mathbf{U}$-.. | 4977 | 1577 | 1185 | 8825 | Mula | 18 |
| 97 | Rovald .. | 4177 | 1477 | 1885 | 8825 | P Ashadbe | 80 |

# II.-BÂRHASPATYA-MÂNA, 

OR

## 60-YEAR CYCLE OF JUPITER

Tee Bdrhaspatya-Mdna, or Cycle of Jupiter, is a period of sixty years, or five revolutions of the planet, each year of which has a different name This era was considered by Warren to be "very ancient,"* but Jaines Punsep, misled by Csoma de Koros aud Rentley, thought at was a "comparatively recent introduction" $\dagger$ The former understood from the Tibetan authorities that the Vrihaspati Chakra was introduced into Indla about the year 965 A D, a date which talled very closely with Bentley's assumed epoch of Varâha Mihira in AD 966-67 Happily, Bentley's vagaries lave long ago been set to rest, while Colebrooke's date of Varâha Mhira, the author of the Sarya Siddhânta, has been satısfactorily astablished As Varâha died in AD 587, his writings describing the Cycles of Jupiter must be referred to the maddle of the Suxth Century a D But as he quotes Vriddha Gaiga as his authority, $\ddagger$ the Jovian Cycle must have been in use before the Christzan era.

There are thiee different modes of reckoning the cycle of sixty years, of which the oldest is certannly that preserved by Varâha Mihna, as the first year of the Kâli-Yuga, by his account, is the twentyseventh year of the Jovian Cycle The second is the reckomang of the Jyotishtava, which is clearly only a correction of Vaîha Mhhra's method, as it makes the trist year of the cycle correspond with the first year of the Kalh-Yuga Both of these reckonungs have been in use in Northern Inda, where the necessary omission of eveny eightysuxth year of the Jovian Cycle has always been pieserved The thurd method is the reckoming followed in the south of India, by which the Jovian year is considered exactly the same as the solar year, and the

[^16]names are taken in succession, without any correction for the difference between the period of one ievolution of the sun and that of one-twelfth part of a revolution of Jupiter By thes mode of reckoning the actual Cycle of Jupiter is entuely lost sight of, and the sixty names become sumply the appellations of as many solar years

The Bârhaspatya-Mâna has been fortunate in finding two such capable expounders as Davis and Wairen, to whose works I may refer for a complete exprosition of the cycle It will be sufficient here to note the ules for finding the years of the cycle according to the two sightly different modes of the Noi thern reckoning

The Sûrya Siddhânta rule, as explained, is as follows -Divide the expired years of the Kâh-Yuga by 86 , add the quotient to the dividend, divide the sum by 60 , and the quotient gives the number of cycles expired Then, if the proposed year should fall less than 31 fiom the last expunged year of the Chakra, add 28 to the remainder, but if it should be moie than 31 , add only 27 , and the remainder so increased will indicate the current year of the Chakra. Take the year 223 A D $=$ 3324 Kâlı-Yuga, as an example
$-86) 3924(38+3324=3362$
$-60-20$ over
ndd 28
30 hh year of 57 th cycle
A 1 eference to the general table will show that this result is correct, reckoning from Prabhava

The rule followed in the second method is thus laid down in the Brihat Sanhita *
"Multiply the years expired since the era of the Saka King by 11 and the product by 4 , add 8589 , divide that suin by 3750 To the quoticnt add the Saka years, divide the sum by 60 (to" find the cycles)

Taking the same year as before A D 223-78=145 Saka-

| $\times$ | 145 | 4 |
| :---: | :---: | :---: |
|  | 11 | $+145$ |
|  | 1595 | 149 |
| $\times$ | 4 | - 60 |
|  |  | Cycles |
|  | 6380 | or 3 |
|  | 8589 |  |
| +3750J1 | 14969 |  |

- Dr Kern'a Translation of the Brihat Sanhita, c wif, $\mathbf{2 0 - 9 1}$.

The Jyotishtava rule is practically the same as that of the Varthe Sanhita, the only real difference being in the amount of the Kehepa, or sum added -"Multiply the Saka year by 22, add 4291 to the product, and divide by 1875 Next add the quotient to the Saka year, and divide the sum by 60 The remander will be the last expired year reckoning from Prabhava."

Taking the same year as before A D 223-78-145 Saka,


In these last two methods the multiplying by 11 and then by 4 of the first is equivalent to multiplying by 44 , which $1 s$ exactly double the multipleer 22 of the second, just as the divisor 3750 of the first 18 double 1875 of the second In ather words, $\frac{11 \times 4}{3750}=\frac{22}{1875}$. There 19 a slaght difference in the Kikepa, or addition, as the half of 8589 is $4294 \frac{1}{2}$, or a little more than 4291 As James Prinsep has remarked, the factor $\frac{29}{1875}$ " 18 equivalent to dividing by 85227 , the period when a year is to be expunged by this system"

But the same result may be obtaned by a further simplafication of the process, as follows - To the Saka date add 195, then divide the sum by 85, and add the quotient to the Saka year Then divide by 60 the quotient will give the number of cycles expired, and the remander the number of expired years of the current cycle Thus taking the same year 145 Saka, the process is

| 145 |  |
| :--- | ---: |
| $+\quad 195$ | +145 <br> -149 <br> 340 |
|  | $60-149$ |

Cyoles $2+29$ years expired.
By the Telinga reckoming of Southern India the cycle began twelve years before the Kali-Yuga, the first year of which corresponds with

Pramatha, the thirteenth year of the cycle The rule for ascertaining the cycle fear for any particular date 18 simply to divide the expired years of the Kall-Yuga by 60, and the quotient will give the number of expired years

> Take the same year A.D $223+3161=3324$ Kalı-Yuga
> - 60 ———

> Cycles $55+24$ years

add 12 for the years before Pramatha, and the tesult is 36 years of the cycle expired, and the 37th year current as in the general table

As the years of the 60-year Cycle of Jupiter arc only occasionally mentioned in the inscriptions of Northern Indaa. I have not thought it worth while to give the Jyotishtava reckoning in addition to that of the Surya Siddhânta In fact, the difference between the two is never more than one year, and that only between the two periods of omitted years In the Second Century A D, the omatted year of the Súrya Siddhanta reckoning took place in 136, while that of the Jyotishtava was two years later-in 138 In A D 394, the omissions took place together In A D 479 the Jyotishtava omitted year preceded that of the Sûrya Siddbânta by one year, but in the present Century the Jyotishtava omitted year, No 48 in 1848, preceded the other, No 1 of 1856, by thirteen years The current years of the two cycles, however, geneally courespond, excepting in the short periods between the two omissions, when they differ by only one year The years 847 and 907 A D were initial years of cycles in all three modes of reckoning and the numbers of all the years coinclded from AD 825 (the 39th year) down to A D 909

The Telinga computation, though useless as an astronomical cycle is of great value in fixing the dates of inscriptions where the numerice figures are at all doubtful, or where the nane of the era may be uncertain Of the latter class there is a very curious example in an inscription translated by Dr Hall * The recosd is dated "in the Saka yeas twelve hundred and seventy-five, called Chutrabhanu, in the light fortmght of $M$ drgaeursha, its fifth day, and Satuiday" Now nothing can apparently be clearer than this date, which corresponds with AD 135̄3, and yet it is absolutely certan that the word 'Saka' cannot be intended for the Salca era,t as the name of Chatrabhanu, which is the 16th year of the Jovian Cycle, corresponds exactly with 1275 of the

[^17]Vikramâditya era accordıng to the Northern reckonıng, while the Saka year 1275 is the 33rd year of the Jovian Cycle in the Noith, and the 27th year in the South, both many yeas distant fiom Chitrablânu But besides this evideuce there is also that of the week day, Satur day, which agrees with Mûıgasıras-Sudı 5 in the Vikramâditya era, and not in the Saka ein, when that date fell on a Monday Another reason for accepting the carlier date $1 s$ the fact that Malwa had already become a province of the Mulammadan cmpure of Delhi long befote Saka 1275, or A D 1353, whereas in Vikıama Samvat 127., or A 1 1218, Mâlwa was stıll under Hindu rule, as the invasion of Iltitmish did not take place untal A.D 1230

A good example of the Southein mode of reckoning is found in the date of the Kardla copper-plates, in 894 Saka in the year Anginas, on Wednesday, the full moon of Aswina, duning an echpse of the moon* The year Anguras is the 6th of the cycle curresponding with 894 Saka (or AD 972) of the Southern leckoming Accolding to the Northern reckoming the year was Sumukha, ol the 7 the But, strange to say, the full moon of Aswina was not a Wednesday according to Cowasjee Patell, $\dagger$ who makes the lum-oclar yean of Saka 804 begin on Tuesday the 19th March 972 AD The full noon of Aswiua is the 192nd day of the ordinary year, which number divided by 7 gives 3 over, or Thursday the 26 th of September for the day of full moon Now we know that there wns an eclipse of the moon on Wednesday the 25th of September AD 972, wheh actually was the full moon of Aswina according to the Northern reckomug of the Sîrya Suddhânta I have calculated the date by both ieckouluge, and I find that, by the Southern reckoning, the 1st Vasâkh of the solar year fell on Friday the 22nd March, and the 1st Chartra-Sudi of the lunt-solar year 449 days earher, or on Monday the 18th March 972 A D, and not on the 19th as given by Cowasjee Patell According to the Noithern ieckoning the lat Varsakh of the solar year fell on Saturday the 23rd March, and the 1st Chaitra-Sudi of the lumssolar yeal 4808 , or five days earhet, -that 1s, on Monday the 18th March By both reckonings, therefore, the full moon of Aswina fell on a Wednesday But the cycle year of Jupiter agrees with the Southern reckoning

The cychic names, however, sometimes disagree one year with the reckoning of the other eras Thus there are no less than three inscriptions, all dated in the Saka year 730, whilst each has a different year of the Jovzan Cycle assigned to it These are Vyâya the 20th year, Sar-
vajut the 21st, and Saivadhâri the 22nd The second name agrees with the date according to the Northoin teckoning, and the last according to the Southern account But the fist, which occurs in the Nâsk inccuption, and should therefore belong to the Southern reckoning, is two years out, and is therefore most probably a mistake

Amongst eighty mscriptions which I have noted as containing year names of the Jovian Cycle, there ave only five which conform to the Northern reckoung The lateat is a short recond on a pillai in the cloisters of the Lâl Darwâza Masjid at Jaunpur,* in which the date 18 stated to be "the year Plava of Samvat 1353" Both dates coirespond with A.D 1206 By the Southein reckoning Plava comcides with Semvat 1358

In the anriexed table I have given the Sainskrit names of all the sixty years, with their numbers counting fion Prabhava The nuabers only ale given in the geneial table for want of space In the unscriptions the names only alc grven, so that whencer the name of a Jovan yeai is found an an inscription, it will be necessary, in the first place, to refer to this table for its number

I have also given tianslations of the Tiveian names which weie derived from the Chinese, for all the suxty yeass They are formed by a combination of the names of the twelve animals of the smaller cycle of twelve ycass with the five elements The first cycle dates fiom A D 1027, and not from 1020, as stated by Csoma dr Koios, and adopted by Prinsep $\dagger$ At page 181 of his Grammar, Csoma competly states that "the prescnt ycar 1834 leng the 28 tli year of the 14 th acle," which gives A D 1807 as the first year, and therefore 11 tahing 1026 as the first year of the first cycle, he is one vean in crion

Prinsep quotes Csoma's account of a menorl of 403 years, termed $M e-k h a-g y a-t s h o$, as preceding the introduction of the Kata-Chakra, or 60-year Cycle of Jupiter in Tibet, and he arlopts \} 4 opimion that it has reference to the Hijra cra "It,' says C'somd ' we add these 403 years to 622 , the first ycai of the Hijia, we have exactly the year 1025, whence with 1026 commences the first ycle of 60 years of the $\mathrm{T}_{1}$ betans" But the correct date was 1027, and the number 403 most prubably had reference to the years passed from the Kashmmi Lok-kal of AD 625

[^18]down to A D 1027, when the Cycle of Jupiter was introduced The name was only a symbohcal mode of reckoning the number 403 as mé, "fire" $=3$, lha, "vacuity" $=0$, gya-tsho, " ocean" $=4$, or put together 403 It had therefore nothing to do with "the entrance of the unfidels into Makhe"

Csoma, in his Chronology, states, that the Badurya Karpo was "written in the first year of the twelfth cycle, or AD 1687" This is correct, as the unit of each initial year of a cycle should be a 7 So also the period elapsed from the introduction of the Kala-Chakra down to 1687 is said to be 660 years, which gives AD 1027 as the first year of the first cycle

It 18 perhaps only accidental that the year 1027 is also the begnnning of the 60-year cycle in Southern India But the comeidence is curious. In Chuna the cycle began in 1024 AD, a fact which is proved by the numbers attached to the Tibetan names in the accompanying table, which shows that three years of the Chinese or Tibetan cycle names had already passed when the Indian cycle, commencing with Prabhava, began.

In my work on Ladakh I have made the same mistake of one year as was done by Csoma himself I stated correctly ( p 396 ) that the year AD 1851 was the 45 th year of the 14 th cycle, for, deducting 44 from 45 and from 1851, we get the first year $=1807$ But in the list of initial years I have given AD 1026 down to 1806, instead of AD 627 to 1807, owing to my fasth in Csoma's accuracy.

BÃ Ithaspatyanchakra
Names of the 60 years of the Jovian Cycle.

| 吹 | SANSKRIT | TIBETAN | 退 |
| :---: | :---: | :---: | :---: |
| 1 | Prabhava | Fire-hare | 4 |
| 2 | Vibhaya | Eerth-dragon | 6 |
| 3 | Sukla | Earth-gerpent | 6 |
| 4 | Pramoda | Iron-horse | 7 |
| 5 | Prajapata | Iron-sheep | 8 |
| 6 | Angiras | Water ape | 9 |
| 7 | Sri Mukhn | W ater-bird | 10 |
| 8 | Bhava | Wood-dog | 11 |
| 9 | Ynvan | Wood-hog | 12 |
| 10 | Dhater | Fire-mousa | 13 |
| 11 | Isware | Fure-ox | 14 |
| 12 | Eahudhanya | Farth-tiger | 15 |
| 13 | Pramitbin | Earth hare | 16 |
| 14 | Fikrama | Iron dragon | 17 |
| 15 | Vrisha | Iron serpent | 18 |
| 16 | Chitrabhenu | Water horse | 19 |
| 17 | Subhénu | Watar sheej | 20 |
| 18 | TGrana | Wood ape | 21 |
| 19 | Parthiva | Wood bird | 22 |
| 20 | Vyayn | Fire-dog | 23 |
| 21 | Sarvajit | Firo hog | 24 |
| 22 | Sarvadhârin | Earth-mouse | 25 |
| 23 | Virodhin | Earth ox | 26 |
| 24 | Vicrita | Iron-tiger | 27 |
| 25 | Khara | Iron ape | 28 |
| 26 | Nandana | Water dragon | 29 |
| 27 | Fijaja | Water merpent | 30 |
| 28 | Jaya | Wood-hbrse | 31 |
| 29 | Masmmethe | Wood-aheep | 32 |
| 30 | Durmakha | Fure-ape | 33 |


| $18$ | SANSKRTT | TIBETAN | \% |
| :---: | :---: | :---: | :---: |
| 31 | Hemalamba | Fire-bird | 34 |
| 32 | Vilamhia | Earth-dog | 35 |
| 33 | Vikarin | Earth hog | 36 |
| 34 | Sarvarı | Iron-monse | 37 |
| 35 | Plava | Iron-ax | 88 |
| 36 | Sobhakrit | Water-tager | 39 |
| 37 | Subhakrat | Water-hare | 40 |
| 98 | Krodhin | Wood-dragon | 41 |
| 38. | Viswavasal | Wood serpent | 42 |
| 10 | Parabhava | Fire horse | 43 |
| 41 | Plavanga | Fire-mbeep | 44 |
| 42 | Kilaka | Earth.-npe | 45 |
| + | Sanmya | Earth-bird | 46 |
| 44 | Sôdhurana | Iron-dog | 47 |
| , 5 | Radhakit | Iron-hog | 48 |
| 46 | Paridhavan | Water mouse | 49 |
| 47 | Pramâdin | Water-ox | 50 |
| 48 | Ananda | Wood tiger | 51 |
| 49 | Irakname | Wood-hare | 52 |
| 50 | Adala | Fire-dragon | 68 |
| 51 | Pingala | Fire-serpent | 54 |
| 62 | Kalayuticn | Earth-boum | 65 |
| 63 | Sıddhtrtha | Earth-gheop | $\stackrel{4}{6}$ |
| 54 | Randra | Iron-ape | 57 |
| 55 | Durmata | Iron-bird | 58 |
| 66 | Dundnbhl | Water-dog | 59 |
| 57 | Udgairia | Water ${ }^{\text {bog }}$ | 60 |
| 58 | Kaktikshe | Wood-mouse | 1 |
| 69 | Kradha | Wood-ox | 2 |
| 60 | Kshays | Fire-tiger | 8 |

# III.-BÂRHASPATYA-MÀNA, 

OR

## 12-YEAR CYCLE OF JUPITER.

$\rightarrow$ GONT
The smaller Cycle of Jupiter consists of a period of twelve years, or one-fifth of the greater Cycle It was described by Davis at some length, but 1 only briefly noticed by War ren * I have already given a detailed account of this Cycle in my attempt to fix the anitial point of the Gupta era $\dagger$ Varâha Mihira notices it in the following terms "Each year (duning which Jupiter completes a twelfth part of bis revolution) has to bear the name of the lunar mansion in which he rises The years follow each other in the same order as the Junar months" They are also named after the lunar months with the prefix of the word ' Mahâ' Thus Lalla says

Magha-oho Maghayam yukta Maghdyam-oha Gwrwrgada Maha Magha
" When both the Moon and Jupiter are in the asterism Maghe, on the day of full moon of the month Magha, then the year 15 called Mahd-Magha"

The statement of Varaha, quoted above, that the year has to bear the name of the manszon in which Jupiter rises requires some explanation The twenty-seven Nakshatra, or lunar mansions, are divided into twelve groups, nine of which compise two mansions only, and the remamung three each three manswons One Nakshatra in each of these twelve groups gives its name to the lum-solar months, and consequently to the years of this cycle

Accordang to the rule for naming the sevelal years of the 12 -year Cycle of Jupiter, the year 18 called after the Nakshatra in which the plauet rises helacally. But in practice the names of the Jovian years

[^19]are made to coincide with those of the luni-solar months So that should the planet rise in Bharaul the year is not called Blârani, but Aswin, which is the name-giving Nakshatra of the group to which Bhaianı belongs

Bhattotpala quotes Garga to the effect that 170 solar years being equal to 175 Jovian yeary, the two names of Aswayuja and Chaitra must be omitted.

This proportion wes aftel wards altered by Varâha, who made 172 years of Jupiter equal to $170_{1 i}^{\circ}$ solat years, on which account two of Brihaspati's years aie to be omitted in that period His words are

[^20]Practically, every eighty-sixth name is expunged, and consequently the omissions aie confined to six names out of the twelve, or, iu other words, the omissions fall only on the alternate names in regular succession Thus the six omitted names are Srâvana, Aswayuja, Mârgasiras, Mâgha, Chaitra, and Jyeshtha The rule for finding the year of the 12-year cycle is only a slight exteusion of that for the 60 -year cycle

Rule -Find the equivalent year of the Saka era, and multiply it by 22 , then add 4291 to the product, and divide by 1875 Add the quotient without fiactions to the Saka, date, and divide the sum by 60 This quotient gives the nuinber of expired cycles, and the remainder the number of expired years of the cuirent cycle counting from Prabhava. To find the year of the 12 -year cycle divide the last remainder by 12 , the quotient will give the number of Jupiter's own revolutions completed, and the remainder will be the numter of years expired of the current 12-yeai cycle, counting from Mahê-Srâvana as the first The following example will show the working of the rules Take A. D. $166=88$ Saka

| I |  |
| :---: | :---: |
| $88 \times 22=1936$ |  |
| +4291 |  |
| -1875 J 6227 (3 |  |
| 88 |  |
| - |  |
| 91 |  |
| +60- |  |
| Cycle $1+31$ years. |  |

But the same result may be obtaned by the shorter process which I have proposed in my account of the 60 -year cycle. Thus, to the Saka date add 195 , then divide the sum by 85 , and add the quotrent to the Saka Then divide by 60 , the quotient will give the number of cycles expired, and the remaiuder the number of expired years of the current oycle The above example will therefore be as follows -

$$
\begin{aligned}
& \text { Baka } 88 \\
& +195 \\
& -\sim \\
& -85) 283(3+88=91 \\
& -60- \\
&
\end{aligned}
$$

Very few inscriptions have hitherto been discoveied dated in the 12-year Cycle of Jupiter But four of these, which are found coupled with the coucurient dates of the Gupta era, are of unusual importance fiom the aid which they may give in fixing the initial point of the Gupta ela, which will be discussed hereafter These four dates are found on the copperplate unscuptions of Raja Hastin and his oon Sankshoba. They are as follows -


Another inscription of the same family on a stone pillar gives the name of Mahâ Magha, but without any concurrent date

Mr Fleet has published* two ancient insciptions of the Kadamba Râjas of Banawâsi in the Dakhin, which are appaiently dated in thas 12-year cycle of Jupiter Both inscriptious are of Raja Mrigesa, the earher one being dated in the year Pausha, which is said to be the third year of his reiga, and the later one in the year Vaisakha, which is said to be the eighth year of his reign From these two statements we learis that the third year of his reagn must have begun in Mahâ Mârgasiras, as shown by the succession of the names of the years as follows -


- Archeulogicial Suivey of India, Vol X, 126-2T

Here unfortunately there is nothing to fix the date beyond the fact that between the years named Malıâ Pausha and Mahâ Vaisakha there was no name omitted But I think that something may perhaps be gained from the inscimptions to assist in finding an approximate date

Sir Arthur Pliayre has published a Burmese inscription fiom Pugân, which appears to me to be dated in the 12-y ear Cycle of Jupiter, as well as in the common eia in use in Burma It opens with the date thus "In the era 551, the Tharcwan yesi" Tharawan is the Burmese pronunciation of Sravana But the year 551, ol AD 1189, was Mah\& Jyeshtha If we might read 553, or AD 1191, then the yenr would correspond with the Indian year of Mahâ Siâana

I have quoted these examples from Banawâsi in the Daklun, and Pugan in Burma, to show how widely spread was the use of the Cycles of Jupiter in anclent times

The people of Tibet and Ladak also make use of a cycle of tivelve years for the computation of shoit periods, such as a peison's age, or the date of any recent event In thes cycle each year is named after a different anımal, as follows -


The only difficulty that I see about accepting the 12-year Jovian Cycle of Varaha for the five centuries which preceded him is the statement of Garga about the omission of Chaitra and Aswayuja as if in his time they werc the only yoars subject to retrenchment But as Garga mentions that 172 of Jupiter's years were equal to 170 solar yeais, white Varaha makes them equal to $170_{1}^{6}$ solar years, the two cycles are practically the same in other respects It does not, however, follow that no other years were subject to omission beause Chaitra and Aswayuja alone are mentioned My impression 1s, that the same'six months that are omitted by Varaha's rale were alsn subject to oraission in Garga's time But even adinitting that Chaitia and Aswayuja were the only two years that were expunged fiom the time of Garga down to Vai aha Mihira, I see no difficulty in adjusting the times of omission so as to make them the only expunged years As Chaitia and Aswayuja aie also ountted years
in Varaha's scheme, they will of course remain constant, as the average period of omission is in both cases the 86 th year If then we accept the year 310 A D in which Chaitra was omitted as common to both systems, we have only to take the Aswayujas and Chaitras which fall necurcst to the 85 -year peniods, ether those preceding (A) or those followmg them (B), and the result will be the same excepting only as regards the names of the other omitted yeass This will be seen at once by the following ariangement of the names -

| Vaidha Muluna. |  |  | Pioposed Arrangements |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A D | Interval |  | A $\mathbf{D}$ | Interal | A | A D | Interval | B |
| 310 |  | Chaitra | 510 |  | Chatera | 310 |  | Chaitra |
| 896 | 86 | Syeshta | 387 | 77 | A | 399 | 89 |  |
| 8 | 85 | Jyeshts |  | 89 | A |  | 89 | Aswryaja |
| 480 |  | Srâvana | 476 |  | Chatra | 488 |  | Chautra |
| 565 | 85 | Aswayuja | 565 | 89 | Aswayuja | 565 | 77 | Abwayuja |
| - | 86 | , | 568 | 77 | Aswayaja | 565 | 89 | Anwayay |
| 660 | 85 | Agrahagana | 642 | 89 | Chaitra | 654 | 89 | Chaitra |
| 735 |  | MHgha | 731 |  | Asway ${ }^{\text {aja }}$ | 743 |  | Abwayuja |
| 820 | 85 | Chaitra | 820 | 89 | Chaitra | 820 | 77 | Chastra |
| - 6 | 510 | yeare |  | 510 | years |  | 510 | years |
| Mean | 85 | interval | Mean | 85 | anterval | Mean | 85 | interval |

From this'table it wall be seen that a regular succession of Chaitras and Aswayujas might be omitted while stili retannigg a unform mean period of elghty-five years It wall also be seen that at every third period the names of the omitted years, as well as the dates of omission, agree with those of Vaı̂̂ha Mihna

## IV - KÂLl-YUGA


The Kâh-Yuga, or fourth age of Hindu Chronology, dates rrom the year 3102 BC , the year 1, expued or completed, beng B C 3101 The Four Yugaa, ol agea, which compuso one Mahê-Yuga, consist of the following pellods -


Regarding the ongin of the Mahd-Yuga I have already expressed my opinion that it was the invention of the antionomers fourled un the precession of the equinoxes It may be ohyected that the division into four Yugas and their duration are mentioned both in the lide of Manu* and in the Maliabliârata But what is the age of Manu's Cocle ; The references to female beratics who wear an inlawfil dres, or a dress unauthorized by the Vedas [ $\mathrm{v}, 89,00$ ], of "finale anchocts, or nuns [vili, 30, 37], and of "heretical books," or books of a false seligion [11,11, and xı, 60], pomt so clearly to Buddhesm that the Code in its present furm must cestandy be postenor to the spread of Buddhism under Asoka.

The era, of the Kall-Fuga was in use down to the time of Valahic Mihira, who first introduced the use of the Saka era into A tronomical woiks Aryabhata, who was not mose than fifty years pitis to hm, still computed by the era of the Kali-Yuga $\dagger$ The intiel point of the ela seems to have been a tiaditional date of the period of the great 1 m , which had been handed down parhaps for ages This date of 3102 lBC
as the year 0 of the Kall-Yuga was accopited by all, and from it the calculations of Aı yabhata, and Varaha Mihira for the solar and luni-solar periods were computed

Where the Kali-Yuga eia is used alone, the day of the month may be expressed either according to the solar calcndar, or to the lumsolar one Frequently the year $1 s$ given in two different eras, one of which may be usually connected with the solar calendar and the other with the lunar In the North of India the Kall-Yuga and the Saka years are generally, but not always, connected with the solar reckoning, while in the South of India the Saka era is usually accompanied with the lunn-solar ieckoning The Sainvat of Vikiamâditya is the only era that is exclusively luni-solai

## V-CYGLE OF PARASURÂMA

The era of Parasurâma is a cycle of 1000 years, which is said to have begun in BC 1175㿿 complete, or 1176 BC curient It has beon described by Warren in his Kâla Sankâlita,* where he staté that ats use is confined to the Southern pait of the Peminsula, called Nalayâlam, comprising Malabâl and Thavancore down to Cape Comorin "The commencement of the year 977 of the 3rd cycle 1-satd to have concided with the 1st of (the solar month) Aswina of 1723 Saka, and the 14th September A D 1800" Hero the Chistian ycar as wrong, as it should be 1801, to agree with Saka 1723 Acconding to Cowayee Patell, the imital day of the year 977 was the 15 th September 1801 The year is a solar one This cycle is also called the Quilon or Kollam eis Di Burgess calls it the Kollarn Andu eia, and says that the la-t expired cycle began on the 25 th August, AD $825 \dagger$ Cowacyee "atcll gives the 29th August of the same year The minal dates of the different cycle ale therefore

| I Cycle | B C | 1176 |  |
| ---: | :---: | :---: | ---: |
| II | $"$ | $\ddot{ }$ | 176 |
| III | $"$ | A D | 825 |
| IV | $"$ | $"$ | 1825 |

It is never used in Upper Inda, and imdeed is scarcely known, except by name, even to the astronomers

[^21]
## VI.-NIRVÂNA OF BUDDHA.

The Nirvdna, or death of the last Buddha Sâkya Muni, has been in use from a very early date down to the present day According to the Buddhist Chroncles of Ceylon and Burma, the Nirvâna took place in 544 BC But as the inauguation of Asoka 18 referred to the year 218 after the Nurvina, it seems puabable that there must be an error in the date of the Nurvana itself to cle extent of sixty-six years, as the chronology of the reign of Asoke is now pietty well asceitaned His father's death tonk place in the year 214 of the Nurvins, or BC 264, and his inauguration as king four years later, after he had prevaled over his biothers.

Only two inseriptions have yet been found which are dated in this era. The first 18 contained in the rock edicts of Asoka at Rupnath and Sahsaram The second occurs in an inscinbed slab which I found in the Temple of Surya in the city of Gaya The date of Asoka's inscirption is the year 256 , or the 42 nd year after the death of his father, his own reign being stated in the chroncleq at 4 years +37 years, or altogether 41 years complete, and 42 current The second date 191813 of the Bhagavat Parmmertte Samvat, ol Nirvina, or Thursday the 1st of Kârtıka-badı

In Northern India the true date of the Nirvana was lostata very early period Thus, in the time of Hwen Thsang, A D 630-645, the Buddhist schnols held widely different opmons, varying from 900 and 1000 years up to 1200,1300 and even 1500 years prior to that date," which would place the Nirvâna of Buddha either m 250, or 350 or 550 or 650 and 850 BC The same extravagant antiquity was also asserted in the time of FaHian, who places the Nirvana during the reign of Ping-Wang, Emperor of China in BC $770-719 \dagger$ A simular antiquity was still clamed as late as the Twelfth Century A D, during the reign of Anoka

[^22]Balla Deva Two of his menptions are dated in the years 51 and 74 of the Lakshmana Sena era, or 14 A D 1157 and 1180 A third anscıption, which is dated in the year 1813 of the Pamnurvitte of Bhagauatc, shows that the time the Nirvina was believed to have occuried, was about 656 to 633 B C.

But these extravagant periody aie disproved by Brahmanical as well as by Buddhist recoids, after making the necessaly correction for the dates of Chandia Gupta and Asoka

The following is the account given in the Brahinaucal Purinas -


Now the period stated in all the Buddhist records as 214 years, the difference of nearly 100 years, being in the reggus between Ajeita Satru and Clandia Gupta In favour of the Budihnat reconds I may remark that Buddhaghosha," the Brahman youlh, born in the neighbourhood of the terrace of the Great Bo-tree, . who hat achieved the knowledge of the thiee Voulas," must have been coginzant of the northern chronology when he translated the Singhalese Atthru-Latha, in which he has adopted the same dates as are found in the Mahawansa and Dipawansa Admitting the correctness of this suggestion, it follows that Buddhaghosha either gave a preference to the Singhalese chronology, or that it did not differ from the not thern chionology in his time, that is in AD 400. But whatever may be the true explanation of the difference, the fact remains that the Buddhists are unanunues in placing the Nirvina of Buddha 214 years privi to the accession of Asoka Acerpting this as the unost probable account of the interval, we obtain foi tine Nirvâna the corrected date of $264+214=478 \mathrm{BC}$, instead of 544 BC , being a difference of 66 years

A novel theory has lately been put forward to account for the disciepancy by 1 fering the Nirvâna to the time of Buddha's attainment of Buddhahood under the sacred tree As this took place when he was $29+6=35$ years old, the difference is only $80-35=45$ years, anstead of 60 years Mr Curter, who proposes this explanation, appears to thınk that Sâkya obtaned Buddhahood at 20 years of age But he only left has home at that age, and had to sit for six yeary under the Bodhi tree at Uruvilwa before he attamed Buddhahood * The Buddhavansa (which he quotes) states vaguely that Gotama did not live to 100 years

| Mr Cuıter's figures ale- |  |
| :--- | :--- |
| Gotama's bırth | 572 BC |
| Nuvâha at 29th year = | 543 M |
| Death accordang to the Inscrıptions | 483 ", |

I must say that I remain quite unconvinced The period that requises coniection is not that between Buddha and Asoka, but the still later peiod of the impossible regrs of Mutasiwo and his sons for 162 year, or exactly bl yeas to one generation If the Butluhist dates of Chandia Gupta and Anoka can be consected to the extent of 60 years, the date of Buddhas Ninvina must le sulject to the same correction, as the period between them does not seen to be capable of extension On the contialy, the Noithein Buddrats seem to have usually cuitailod it to 100 years as stated by Hwen Thsang, as well as in the Asoka Avadâua $\dagger$ A single nothen work, the Avadana Sataka, extends the period between the Nirvâna and Asoka to 200 years

For these reasons I retann the year 544 BC as the aecepted date of Buddha's Nirvana, according to the Buddhist chonology of Ceylon and Burma At the same time I think that there must certanly be an error in this date to the extent of about 66 years as shown by the subsequent dates of Chandra Gupta and Asoka.

[^23]
## VII-NIRYÂNA of mahâvira.

The Jans make use of an era dating fiom the Nıv vâna, i death of their last teacher Mahîvia Aceordug to the Swetàmbara seet this event took place 470 years before Vihatana, or un B C ;27 The Digambaras, howevel, mahe it 605 year, before Vakama $A_{4}$ the difference between the tiva dates is exactly 185 yuars, it seems probable that the Digamharic date of 605 years betone. Vikama should be alteted to 605 years befure Sâka, which would agree with that of the othel seet I have made many enquines on thas subject tom leanded Jaing in Noithern India, and the answe lias been unfonmly the same, ' 470 years kefore Vikiamulitya" Thas also is the date given by the Jains of Gujaite The same date sured thoughout the Theiavali of Mustunga, whu sat) "Before thr commencement of the zeign of Vikrama, Su Veran Nuvinna took place 470 ytas" $\dagger$ Chlonel Mule alva, in his account of the Jauas of Gujautat and Nầwàn uses the samo date $\ddagger$ Colonel Tod makes the era 47 ? yenis before Vikrama

[^24]
## VIII-ERA OF THE SELEUKIDE.

-achaters
The initial point of the Seleukrdan era has been fixed by Fynes Olinton to the lst of October 312 BC , in the beginning of Olympad XVII, 1* According to Ulugh Beg this era began 12 years after the death of Alexandel, and 340,700 days before the Hyjra of Muhaminall, 16 th July AD 622 Now 311 complete years BC plus 621 complete years $A D=932$ Julan years, contain 340,414 days, which delucted from 340,700 leave 286 days to be accounted for As the Hyra era dates from 16th July there are 106 days in A D 622, which leave only 90 days pitor to the begnning of BC 311, so that, according to Ulugh Beg, the Seleukidan ela must have begun on the 31d of October BC 312 The other datum of 12 years after the death of Alexander ches not 1 efor to the actual date of Alexauder's death, but to the imitial lay of the 425th year of Nabonasar, 12th November 324 B C, in which year Alexander died Twelve years later places the beginuing of the Seleukidan ela near the end of the year 312 BC

This era dates from the defeat of Nikanor, the general of Antigonus, by Seleukus, who thus became master of Babylon in Olympiad XVII, I The intial date of the era in BC 312 is also estabhahed by the dates on several coins, of which one of Hadrian bears the daie HKY, and another of Caracalla bears the date of HKФ As Hadıaan began to reign on the 11th August 117 AD, and Caracalle on the 8th April 217 AD, the first year of the era referred to must have sucluded the dates of 8th April and 11th of August 311 BC $\dagger$

The names of the months were the same as those of the Macedonaan Calendar But as the Seleukidan year began in October, the first month must have been Hyperberetaus The order of the Macedoman months has been gathered by Clinton from Josephus and Suidas

[^25]who compare them with the Hebrew and Roman months* Clinton givos en extract from Cardinal Norisius, who quotes Hieronymus to show that in Antioch and other Syian cities the year began with Hyperberetæus -
"In quarto mense qui apud nos vocatur Januarius, apud Oisantales enm populos, October erat pumis menqis, et Jnnuaring quartus Est (Shebat) in acerrimo hyemis, quu ab Kgyptús Mechir, à Macedonibus Mepitos, à Romams Februarius appellatur" So also Corsmi and Scaliger make Hyperberetæus the first month The following aie the names of the months with the corresponing months of the Jewish Calendar as found in Josephus and other authors-

| Macedonian |  | IIEBREN | ENGíNBH |
| :---: | :---: | :---: | :---: |
| 1 | Hyperbereteus | Timet | October |
| 2 | Dius .. | Marcheawno | November |
| 3 | A pellmus | Kialeu | December |
| 4 | Audynæus | Tebetls | Jamuary |
| 5 | Peritiun | Shebnt | Febiuaty |
| 6 | Dystrus | Adar | Mnach |
| 7 | Xanthikus | N198n | Apral |
| 8 | Artemisus | Ijar | Mny |
| 9 | Jmatus | Swan | June |
| 10 | Panemus | ${ }^{1}$ I n muz | Joly |
| 11 | Lous | Ab | August |
| 12 | Gorpreus | Elal | September |

Now the Macedoman Calendar, like that of the Athenians, was a luni-solar cycle of 19 solar years, or 235 lunar months, and as more than a century had elapsed from the time of Meton when Seleukus established his era, there can be no reasonable doubt that the Metonic cycle was adopted in Syria This is proved by the following facts $\dagger$

1 "Whenever Macedoman months are compared with Attic or lunar months, it nowhere appears that they differ in their dimensions or contents

2 "Seleukus Nikator, the founder of the kingdom of the Seleukidm, gave order to affix the Macedomian names to the Syian months, which were unquestionably lunar

[^26]3 "Ptolemy, in his Almagest, gives the dates of various eclıpses and occultations obseived at Babylon between the years B C 721 and 229 The last three dates, BC 245, 237, 229, bear tho names of Macedonian months, and by calculation prove that the Babylonians under the Seleukidx measured time by lunar months with Macedoman names

4 "The date on the Rosetta stone, IX Ptolemy Epiphanes, 18th Mechir_= 4th of Macedonian Xanthikus, being reduced, proves the same thing "

These facts show most decisively that the Syro-Macedonian calcndar of the Scleukidæ was luni-solar, and not solar, as is fiequently stated * Thus James Prinsep, copying an aiticle fiom the Coinpanion to the Nimanac for 1830, says -"Then year was solar, and consisted of 365 days, with the addition of a day every fourth year." But the calendar of $365 \frac{1}{4}$ days is the Julian calendar, which was not adopted in Syma until some time after the Chistian era, when it had become a Roman province

As the Syio-Macedonian montlis were lunar, there must have bcen seven intercalary months inscrted at certain periods in each cycle of 19 years Accolding to the Greek cycle of Mcton, these insertions took place in the 31d, 5 th, 8 th, 11 th, 13th, 16 th , 19 th years of the cycle "The name of the old Macedouran intercalary month is mferred from 2 Maccabees, XI, 21, wheie the date of a manifesto issued by Lysies, General of Antiochus Eupatol, is given as 24th Divonopiverov, but in the Vulgate 24 Dioscona, and from the Etymol ${ }^{m}$ Magm we learn, that diónopos was the name of a month A missive of Antiochus, evidently witten not much later, is dated 15th. Xanthikos Hence it is inferied that the place of this inteicalary month $\Delta$ córnopos was the saine as that of the Jewish month, qe, before Nisan " $\dagger$

The introduction of the Julian reckoning must have been confined to Syria and the western piovinces of the Seleukidan empire, which had been annexed to Rome But in the Eastein provinces, which then foimed the Paithan empire, the lum-solai reckoning still maintaned its place This is proved most conclusively by the following facts It was the custom of the later Parthan kings to date all their large silver coins with the month and ycar of then issue The names of all the twelve Macedonian months have thus been found on the cons of the Parthan

[^27]kings There are a few slight differences, such as Xundikus for Xanthukus, and Solouns for Louy But on one com of Vologeses III, I find the name of emboai, which can only be that of the intercalary or embolusmuc month* This is acconipuncd with the date or of 460, or A D 178-9, in which year there was an intercalary month accouning to my table It is clear, therefore, that, up to this late period, the people of the Parthian empire still continued to use the luni-solai reckoning of the Macedoman Calendar

I have been thus paticular an deacribmg the Syro-Macedonian Calendar of the Neleukida ay we know that it was in use in the northwest of India, duimg the period of Indo-Scythian anle, from which we may infer, with some cutainty, that it must have been the common reckoning of then prentecessors, the Bactiran (dief's Mr Thumas has already shown that this is highly probabio, but nothing has yet been fourd to determine it absolutely

Is the Iudo-Scytman inseriptions, the names of four different Macedonian months hive been lonnd,-namelv, Panemos, Daisios, Apellasos, and Aitermsioy $I$ 'wnecurience at theye names showa meontestably
 Noith-Western Indir ly the Jantuan Girwh, and as the province to the west of the lahar hav lofonged to Selaban I comulude that the era of the 'selcukude munt has been adopte 1 thent alho Unfortunately, the year dates hithetio lixcosered ase all senall inmbers, which maght refer to some lecaritly "atabliblied wa of he Judu-Scythans, or, as suggested hy Mr Thomes, they may possilh iffis his the Selcukidne era by learner sut the homethe, whein was the common lindian mode of reckonugg the yea of the Suthenth-hâl With the Indo-Scythan
 and of $33,39,47$, anid if of Huvishita marat tithon bereferied to a
 of the fifth selukilan e utury, by leavmer nut $\mathbf{y}$ (ho in the former case. the year 9 of Kenubika would be $78+9=87$ A $D$, while w the latter case it would be ielericd to whe year 409 of the S-liuhidin eia, equel to A. D 97-98

It is doubtful, except in a few mstancers, whether any cons of the Greck kings are dated The thee letters Pul on the exergue of the con of Platon can only bexplamed as a date. althoneth the sual order of IMP is icversed Ay a dite they represtrit 1 却 whel, can only be

[^28]referred to the Seleukidan era, and would, therefore, be equivalent to B C 165-164 The letters Or, or 73, are found on a com of Eukratider, and the lettels M1, or 83, on several coms of Hehokles That these are mont prolably dates has been proved by Mr Thomas, by a reference to a conn of Hehuhles in the Butish Museum, beanng the full date PTIf, or 183* I have smee acquicd a tetiadiachm of Eukiatides with the detached letters N., wheh may also be read as a date, or $51=151$ of the Scleukidar ala According to these dates we have-


After this the dates on the Gheek coms would seem to be, as Mr Thomas suggests, only regnal years of the different kings

Havinc arcepted these dates-and I do not see how they can be digjuted-I feel that the dates found in the Indo-Seythan imseriptions along with the names of the Macedons.n months must also be refersed to the Soluakidan cia I am quite prepared, therefore, to acecpt all the dates of the Indo-Seythan msciptious fiom Kabul and Tasila and Nathura as helonging to the Selenkidan ena, with the hundieds omited after the Imdian custom 'Ihns also would appear to be Mi Thomas's conclusion, when he sats "The questron thus anses whether this later pactice (ut using the Macedoman names of the monthy) does not unply a continued use of the Seleukulan eia, in association with which tho names must first have rcached India'

Under this new, the follewing will be the dates of the Indo-Scythan Prnuces Kanıshha, Huvishka, and Vâcu Deva

$$
\begin{aligned}
& \text { AD } 80 \text { K }{ }^{r} \text { neshha, S } 9=409-312 \Rightarrow 97 \text { AD } \\
& \text { S } 28=428-312=116- \\
& \text { AD } 120 \text { duticskha, S } 33=433-312=1.11 \text { AD } \\
& \text { S } 51=451-312=139- \\
& \text { A D } 150 \text { Уâsu Duva, S } 87=487-312-175 \text { A D } \\
& \text { S } 98=498-312-186 \mathrm{AD} \\
& \text { A D 190, close of Indo-Scythana rule in Noathern Indaa }
\end{aligned}
$$

The accuracy of these dates is confirmed by the discovery of gold cons of Wema Kadphiser Kaninka and Huvichka nin the Ahn posh Stupa, along with some Roman gold coms of Donitian, Tiajan, and

[^29] Vol. IX, ${ }^{3}$

Sabina, the wife of Hadrian Sabina died in A.D 137, and as there was ouly one com of Huvishka amongst twenty-one specinens, the Stupa was probably built not later than 130 AD

Undel these circumstances it appears to me that some account of the era of the Seleukidæ 19 absolutity necessaly for anv woik treating of eaily Indian dates $I$ lave therefore diawn up the accompanying tables of the initial days of all the years of the ela fiom its commencement down to the close of the Partman empite in the carly part of the Third Century A D I have studied the accounts given by Cluton in his Fasti Hellenict, and by Browne in his Ordo Saclonum, and I have examined most of their authonties in the original I have also computed many of the test calculations for myself, some of which will be noticed piesently

The old Gieek year consisted originally of 360 days, divided into 12 months of 30 days each But do many of the Greek festrals depended on the moon, it was son descovered that the true length of a mean lunation was about $99 \frac{1}{2} d 2 y$, and that of a solar year about 36 iduy 4 Vanous methods were auloptid liom trme to time fir accommolating the computation by luma houths to the solar year In the tune of Penkles the enneuten is, or cycle of \& solal yeas, was in use This consisted of 8 lunar yeas of 3 j4 day's cach, with the addinon of 3 antercalary months, in the Bid, jth, and sth fuas, maling a total of 90 lunations or lunar montlis Buta, 8 sola jedis of $36 \cdot \frac{1}{4}$ days contan 9022 days, whie 99 lunation of 292 dag amunt to only $2920 \frac{1}{2}$ days, fhere was a deficency of one day andir half in evtry cycle of 8 yeans

To ruacdy thus defect Meton proposed in B C 432 his famous cyele of 10 whin yras of 36 tid day's each, which differs by ouly a small fiaction from 295 lumations Metons value of the 15 solat yeara in 6940 days was a little in excess of the $t_{1}$ uth, as a year of 30 at day aryes only f93975 days m 15 years As thas excess of $\frac{1}{t}$ day amountwit to a whole day un 76 years, Kallippus in BC :330, whoduced the cy cie of 76 years, or four Metome periods, fiom which be retienched the extia day But

 Timochalis of the abth and 47 the years heing anne communes, that he closed the uth Metomic cycle at its 8th year, on BC 330, which, accordingly, became an anuua contmunts as the 1st of the Kallippre cycle of 76 years, which could not have happened if the onginal Metonic cycle had not been interrupted But Cluton quotes a maible which renders this ariangement doubtful It is quite certain that it conll not have been adopted in Syin, as we know that the year 148 of the Seleuhdan
era, or B C 165-64, was intercalary,* which is true of the Metonic cycle, but disag ees with that of Kalhppus As the Parthian coin of Vologases III shows the same accordance with the Metonce reckoning, there can be no doubt that the Kallippic correction hid not been introduced into elther Syria or Parthia Clinton also deduces fiom "the three years described by Ptolmy as 67, 75, and 82 of the Chaldwans, commeneing respectively October 15, Ortobev 16, and October 1, that the Maeedomans must have recerved the cycle in the 9th year of a Metonce arad-xacdesaernpes, which would be the second of a Kallippic. For this reason I have adoptcd the Metonic cycle in the aceompruming tables, which show the initial day of everv year down to the clour of the Parthan empire I have numbered the Met, nuc eycles I, II, JII, IV, \&c, and should it be required to convert any date wito the Kallipue reckoning, it is only necessary to thow back evely date in ench penod of 76 y cars liy one day, or, as the Kallippie correction sas establwhad in BC 330, to antedate by one day cray mind day m the Mrome Cy cles IV, V, VI VII, by two days thosc of Cyeles VLIJ, IX, A, XI, by threc days those of Cycles XII, X11I, XIV XV, and so on, deducting one more day for evuly four Metonic cycles

In the old cycle of 8 years the lunar months consusted nominnlly of 30 days each one 'ray being "omitted between the 20th and 30th of every alternate monil But m those months fum whinch a day was deducted, the last day was still ralled-panar, and the day omitted was perhaps the 29th, on any othex day but the ?0th + Meton also retained the nominal value of the noonth at 30 dara bit he pioposed a new scheme for the days to be omitted As 235 hanations at 30 thys each amounted to 7070 dars on 110 days in exces of the 6940 dara assigned to 19 solar years, he dersed the sumbrous abl mennemunt plan of omitting every 63rd day thaughout the cuch bat it is not known whether he monded on excluded the seven motralary months These omitted days ol nurear, itapron $\mu$, are shown in the table, which is altered from Clintois Attic tahles to suit the Macedoman Calendar

The seven intercalary months of the Metome cycle were added at the end of the 3 rd; 5 th, 8 th 21 th, 13th, 16 th, and $10 t h$ years But in the Macedouian Calendar the embolismic month wis placer in the middle of the year nmmediately preceding Xanthikos + C'linton supposes that the embolismic months weie also subicet to the etrenchment of the 63rd

[^30]day, should it happen to fall upon them But this cannot have been the case, otherwise the number of omitted days would have amounted to 1119 , or nenrly 2 m excess of the required number of 110 Meton's scheme consisted of a cycle of 19 years, each of 12 months of 30 days, with seven intercalary months also of 30 days, making altogether 7050 days, from which 110 days weie to be deducted to oltan the requied number of (6940 days, by omitting every 63rd day Now if the embolismic months had been subject to curtanlment, the number of omitted days would have heen 112 But if they were not subject to these omissions, the requred number of 6940 days would have been obtained by passing them over, and strihing out the day from the following month This arangement is shown in Table VII, where the embolismic month of 30 days is placed in the maddle of the year between Pustron and Xanthhus

But these is another gialo objection to Chaton's scheme, namely, that it would make all the last tou montha of the cycle full months of 30 days, and as the tist two monthe of each eycle were necessarily fall months, then would have bee n molers than is conserutive full monthy all lumped together $l$ look upon thas resule as quite fatal to lus selin me

Now, the muangement wheh I propose, an shonen in Table VII, is quite fier feom thin defect a it has not cran a harte motance of thee full monthes comung tose the and mak one of thes hollons on short months-mamely in the last 10 of one cybly ind first twn yenrs of the suceceding one $A$ ording to (hator, scla me if a new moon had fallen in the tunt day of the fit of tle she comecotive full montha $n$ new moon wculd have occurcel thre whole days before the begmongr of the seventh mouth $\mathrm{By}_{\mathrm{y}} \mathrm{my}$ anangement, the new moon would only


To teat the tablen, I will tahc the date of the battle of Arbela, which tooh place on the twelfth day atter an telpme of the moon, the two al mie, having becuduan mp facmy cach other on the eleventh night after the echpes Now the day of battle has been fixed to the 2nd of October BC 331 by the mention of this eclipere The eclopse tuok place on the night of 20 th of September at full moon, and the new moon.which opened the nexi Macedonian ycar, muat, therefore liave fallen on the 5 th of October According to my table, the new yca's day fell on the 4th October We know that the battle took place very near the end of the Macedouran month, as Anstander had foietold that "a battle would be fought in that veiy month"* Thic 2nd of October was the 29th of Gorpieus, or the last day but one of the month

## IX.-ERA OF PARTHIA.

Tre notice of a Parthian era was discovered by Cor Smith amongst the cuneifurm records at Babylon. Three Parthian tablets were obtained at Babylon itself, but only one of them was perfect This gave a double date as follows -
" Moath _—— 23id day, 144th year, which 1s called the 208t, year, Arsakes, king of kings"

George Smith gives the year 248 BC as the first year of the Parthan eia But as the first year of the Seleukidan era did not begin until October 312 BC ol 311 $k$, only three months of the year 248 at the vely utmost can be assigned to the first year of the Parthian era But if, as 19 quite possible, the Parthan era did not begin until about the muddle of the Seleukidan year, its mathal ponnt would have been in April 247 BC, ol even later, instead of in October 248, and it would not have ended untal Apul 246 or later Now Antiochus If Theos died in January $240, \dagger$ and as Strabo, Appian, and Sudas, all agrec in assigning the revolt of the Parthans to the period iminediately following the death of Antiochus II, I think there is a very strong reason for adopting some middle month of the year 247 BC as the imital point of the Parthian era I had alieady aclopted the year 246 for the nse of Bactrian independence, on the testimony of the authors above quoted, in my account of the Cinins of Alexander's successors in the East $\ddagger$ And as 1 have shown that the date of the death of Antrochus may easily have fallen within the first year of the Parthian eia as now established by the cuneiform inscuptions, I think that the year 247 has a better clam to be considered the starting point of Paithian independence thau the previous year 248

[^31]
## X -Vikramaditya samvat.

$-\infty=$

The Vikramaditya Samvat, or era of Vikramâditya, 18 reckoned from the vernal equinox of the year 57 BC , and the cotopletion of the KalıYuga year 3044 It is used all over Northern Indıa, except in Bengal, where the Saka era has been generally adopted It is used also in Telngâna and Gujaiât, but in the latter province the year does not begin until seven months later than in the north, or with the lat of Kartik-Sudi, which now falls during October, but which, at the beginning of the Christian era, fell between tie maddle of September and the middle of October

This era is said to have been estabhshed by Vikramâditya, a. kıng of Ujain, to commemorate his victoly osel the Sakas The earhest date yet found in any insciption, with the name of Vikıamâditya attached to it, is one of Raja Jâjka, whose name is aheady well kuown from the Morbi inscmption bearing the date of 585 of the Gupta era In this new unscription the date, as read by Pandıt Bhagwân Lâl, us thus expressed
"In the Vikrama Samvatsara 94, in eildition to 700, on the 30th day (amavdeya) of the dark half of the ronth of Kartika, Suadey, in the afternoon (?) on the occession of a solar echipse"

The text of this inscription has now been published by Dr Buller Who gives the following tianslation of the date *
" When seven hundred years of Vikrams exceeded by minety-four (in figuies) 794 (had passed) in the second half of the month Kârtika, at the new moon, on a Sunday, under the constellation Jy eshtha, on the occasion of an echpse of the sun"

[^32]Now the last day of Kartika in the Vikrama Samvat 794 was the 28th of October AD 737, which day was a Monday, and not a Sunday as stated in the inscription, and there was no eclipse on that date, Dr Buhler, therefore, suggests that, as "the figure for the year probably refers, as usual in Iudian dates, to completed years, the grant must have been 1ssued at the end of Kartika (in Gujarlt the first month) of Vikrama Samvat 795." Now this 18 absolutely amposerble All Indian dates are given in completed years, and the Gujarat year of Vikrama Samvat 794 began on the 30th September 737 A.D, and ended on the 18th October 738 Ou this point there 28 no possibility of mistake, as the date 18 recorded in words as well as in figues It is true that there was an eclipse of the sun on the 18rh October 738, but that date, according to Hindu reckoning, was the last day of Aswina, and was a Saturday and not a Sunday At present the Vikramàditya years begin with the 1st of Kârtika, but Abu Rihan mentions that in Sindh the year began with the following month of Mankhir, or Mâigasiras * Now, if this was the case in the nexghbouring country of Gujarât, the month of Kartike would have fallen in the end of the year 794, and if theie had been no intercalary month, the last day of Kârtika would have been the actual eclpss day, 18th October 738 AD But, according to the usual reckoning, the month of Ashadha was intercalary in that year, so that the last day of Kârtika fell on the $16 \mathrm{th}_{\mathrm{h}}$ of November $\mathrm{As}_{\mathrm{s}}$ it is quite clear that there must be a mistake somewhere, I think it pro bable that it may be in the name of the month, I would, therefore, propose to read Aswina 794 for Kêrtika 794, which would agree with the real echpse day of 18 th October 738 But as that day was a Saturday, a very mauspicious day, the whiting of the grant was probably mate on the following day, or Sunday, which was the first day of Kârtika, and this might have led to the substitution of the name of Kârtika for that of Aswina as the actual day of the echpre

But a very much earleer date, presumably of Vakramaditya, has been brought to notice by $\mathrm{D}_{1}$ Buhler in one of the Gujaît inscriptions of Jayabhata, which, although no era is named, must also certanly he referred to the Vikramâditya Sarmvat $\dagger$ He reads the year as "Samvat 486, Sunday, the tenth day of the bright half of Ashâdha-Sud, when the sun entered the sign of the Scorpion"

The Vikrama Samvat year 486 began in Gujarat, acecrding to the present reckonıng, on the lst Kârtıke-Sudı, or 28th September A.D 429,

[^33]so that the 10 th of Ashediha-Suds would have fallen in the following year, A.D. 430 As there was no intercalary month in that year, the 10th of Ashâdha-Sudı was the 99th dry calculated from the 1st ChartraSudi, or Tuesday, 11th March 430, which brings the date to Tuesday the 17 th June, thus agreening with the Tuesday already calculated by two Bombay authorities for Dr Buhler But as the day was a Sunday, according to the insciiption, it seems to me not improbable that the date may not have been read quite correctly The only year whinch I can find that agrees with the week day indicated is Vikrama Sampat 497, in which year the 10 th of Ashêdha-Sudi fell on Sunday, the 15 th June A.D 441 If the figure for 80 was myured below, as the figure for 400 certanly was, then the decumal figure read as 80 , might have been 90 and the Samvat yeal might, perhaps, be 497

In the Jain books also there is very early mention of the Vikrama Samvat Thus the Satrunjaya Mahatmya professes to have been written 477 years after Vikrama, or in A.D 420, when "Silêdıtya, kıng of Vallabhı, expelled the Buddhists from Saurashtra, recovered Satrunjaya and other places of pilgrimage from them, and erected many Jain temples "* The era of Vikrama also is said to have been established by Vikramârka Raja 470 years after Mahâvira, or in $527-470=57$ BC From the way in which he is spoken of as "honouriag the advice of Siddha Sena Suri as the words of Jana," it would appear that Vikramârka was a Jaina, which would account for the use of his era in the Jaina books, as well as for the non-mention of it in early Brahmanical inscriptions

Most of our early writers, as Colebrooke, Wilford, Tod, and Jervis, have vitiated their chronology by placing the mitial point of the Vikramêditya era in 56 BC, instead of in 57 BC , as shown by Prinsep $\dagger$ The following examples from Colebrooke and Tod show how necessary it is to be strictly exact in dealing with dates

1 In one of "Three grants of land found at Uyayın," the recorded date 18 an echpse of the moon in Srâvana of 1200 Samvat Using the erroneous equation of 56 , Colebrooke identifies this eclipse with that of the 16th July 1144 A D $\ddagger$ But the true date was $1200-57=1143$ AD, in which year there was an eclipse of the moon on 28th July, which day was also the full moon of Srâvana

[^34]2 But Tod's mistake as even more curnous He quotes the wellknown Balabhi inseription, whech gives the month of Ashadhe of the year 1320 of Vikrama along with the yean 045 of the Balabhi era. He eccordingly takes the yeat 375 [or 1320-945] of Vikrama as the initial point of the Balabhi era from which, deducting 56, he obtains AD 319 Here has equation of 56 gives a true result, because he $1 s$ dealing with an inscription from Gujarât, where the Vikrama yoar does not begin until 1st Kartika-Sudi In the same inscription the Hijra date 18 also given as 662 Now, as this yeai did not begin until the 4th November 1263, it is obvious that the Hindu month of Ashadha, or June-July, naust belong to AD 1264, and not to AD 1263 We thus learn that the Vikrama Sampat year referred to in the inscription must have begun in October, as is still the practice in Gujarât, and that the year 1320 must he reckoned from 1st Kârtika-Sudi, or from October AD 1263 to October 1264, and not from March 1263 to March 1264 The equation for the Gujarat reckuning of the Vikraina Samvat 18, therefore, $56 \frac{1}{6}$, on, in round numbers, 56 , which gives $\Delta D 1264$ as the equivalent of the Vikrama Sainvat 1320 , as well as of the Hıjra year 662 If the yeai of Vikiama had been reckoned from the last new moon preceding the vernal equinox, the date of the inscription would have been $1320-57=$ 1263 A D, so that the month of Ashêdha (or June-July) would have fallen foun montis before the beginning of the Muhammadan jear 662

## XI -GRAHA-PARIVRITHI CYCLE

-rentor
This is a cycle of 90 years, which is in use ouly in Southein India Warren has desciibed it fiom the account of the Poituguese Missionary Beschi, who lived for forty years in Madura It begins in the Kall-Yuga 3078 , or BC 24 As the second cycle would have fallen in AD 76, it seems probable that it may have some connection with the Jyotishi cycle of Jupitel, which dates from the same period

## XII.-SÂKA ERA.

Thz Saka-kal, called also SAkca-bhripa-kal and Sdkendra-kal or the "era of the Saka Kıng," is perhaps more widely used than any other era Abu Rihan says that it was specially employed by the astronomers But Aryabata and his predecessors would appear to have made use of the Kâli-Yuga for all their calculations, and it was Vaiâha Mihira who first made use of the Sâka-kal in astronomical works Abu Rihân, who correctly describes it as dating 135 years after Vikramaditya, eays, that "Saka was the name of a king who reigned over the country gituated between the Indus and the Sea, Vikramâditya marched aganst him and kalled him in a battle fought near Korur, between Multan and the Fort of Lum" The town of Kahror still exists in the neighbourhood of Multan and Bahawalpur. But this Vikramêditya, as Abu Rihann remarks, could not, owing to the long interval of 135 years, be the same as the famous prince who extablished the Vikrama Samvat The name of the Saka king was Sâlivâhan, and accordingly the era $1 s$ now very generally called Sâka Sâhvâhana It is also known as the Sâka Samvat.

The reckoning of the Saka ers begins with the vernal equinox of the Kalh-Yuga year 3179 , or A D 78 But as the Indaans count only by completed years, the year 1 begins with the vernal equinox of KallYuga 3180, or A D. 79 In Northern and Southern India it is usually employed along with the luni-solar calendar, but in Bengal it is generally used with the solar calendar

In converting Sâka dates into Christian reckoning, 78 years must be added to the given date, and unce versa to convert Christana dates into Saka reckoning, 78 years must be deducted from the former

## XIII.-GUPTA ERA

- 0 -

The Gupto-kal, or Gupta era, is not mentioned by any native writer, although it is found in several ancient inscriphons, as well as on the coins of the Gupta kings It is however noticed by Abu Rihan, who makes the singular mistake of dating it from the epoch of their extermination, and of confounding it with the era of Balabhi Now the mitial point of the Balabhi era is known absolutely from Colonel Tod's inscription, which makes the year $1=319$ AD, which as precisely the same date that is assigned to it by Abu Ruhân, who says, that it is posterior to Sâka by 241 years, or $241+78=319$ A D But as he goes on to say "Apparemment Ballaba suivit immediatement les Guptas," it is clear that the Guptas must have reigned before A D 319

The contusion about the two eras has probably arisen from the fact that the Balabhi kings, in all their copper-plate gants, continued to use the Gupta era instead of making use of the Balabhi era itself The following dates of the Guptankêl are found on the coins and inseriptions of the Gupta kings and in the records of their contemporaries

1 Samodra Gupta
2 Orandra-Gupta
5 KUMARA-GUPTA
4 Skanda-Gupra
5 Budha Gufta

6 Reja Hagtin

7 Bhja Safgemoba

Copper-plate, $\mathrm{S}_{40}$
-. Inscriptions, 88293
Inscription, 8 94 98-126
$\left\{\begin{array}{l}\text { Insoriptions, S 137-138-141-146 } \\ \text { Coins, S 144-145 } 149\end{array}\right.$
(Inecriptions, 8 165
<Colns, 174-180 odd
(S 166-and year Mbher Vassthcha
$\left\{\begin{array}{l}8163 \text { (resd 173) yebr Mahk Aswayuju }\end{array}\right.$
|B 191 Mah
\$ 209 Mank Aswajaja.

The last four dates, which are recorded in two different reckonings, I have already made use of in my attempt to fix the initial point of the Gupta-kal * The title of maha, prefixed to the names of the four years, shows that the reckoning belongs to the Lesser Bârhaspatya Chakra, or

[^35]12-year Cycle of Jupiter. This cycle I have already described, and as the General Table gives all the names of the years in due order, marking each period of the omission of a name by a black circle, it will be easy to follow the arrangement by a reference to the Tables

As the 12th part of one revolution of Jupiter is considerably more than four days less than one. solar year, a difference which amounts to one whole year in a hittle more than 85 solar years, the rule is to omit every 86th name Now the double dates which I have given above show that, from the year 156 to 209 of the Gupta era, there was no name of the Jovian Cycle omitted As this fact seemed to me to offer a ready means of obtaming an approximate date for the beginuing of the Guptakal, I diew up a Table showing the names of all the years of the 12 -year cycle from the beginning of the Chistian era down to the present day Now as there was no omitted name between the yenrs 156 and 209 of the Gupta era, or for a period of 54 years, the first date of Maha Vaısâkha, or Gupta-kâl 156, must he wathin the perıod of 32 years ( 86 - 54) succeeding one of the omitted names On refeining to the General Table, where the names of the years of the 12 -year cycle ale all given, it will be seen that the date of 156 Gupta-kil must, therefore, he within some one of the following peliods

$$
\begin{aligned}
& \text { 1-A D } 225 \text { to } 257 \text {, or } 225+32 \\
& \text { 2-A D } 310 \text { to } 342 \text {, or } 310+32 \\
& \text { 3-A D. } 395 \text { to } 427, \text { or } 395+32
\end{aligned}
$$

In the first period the only dates on which Mahi Vasakba falls are three, namely, AD 227, 239, 251 But as these dates would place the beginning of the Gupta era in AD 73, 81, or 95 , they may be given up as too early

In the second $\Gamma^{\sim}{ }^{\prime} 10 d$ the dates of Mahâ Varsâkha are A D 310,32y, 334 If 310 be aken as 156 of the Gupta-kal, then the year 1 wall fall in $310-155=155$ AD This would place the date of Budha Gupta's Pillar in $154+165=319$ A D, but as the week day of 12 th Ashâdha-Sudr in Budha Gupta's nnscription fell on a Tuesday in that year, and not on a Thursday as requized, that date must be given up *

If the middle number 322 be taken as 156 of the Gupta-kal, then the year 1 will fall in $322-155=167 \mathrm{AD}$, and the date of Budha Gupta's Pillar in $166+165=331$ AD, in which year the 12 th of Ashtidha-Sudi did fall on a Thursday

[^36]If the thind namber 334 be taken as 1066 of the Gupta-kûl, then the year 1 will fall in $334-155=179 \mathrm{~A} D$, and the, yeal 165 of Budha Gupta's Pillar in A.1) $178+165=3 \neq 3$, in wheh year the 12 th AshâdhaSudi fell an a Monday

In the group of 85 years frc $n$ AD 310 io 395 , there 18 theietone only one year, AD 322, that will satusfy the two requinements of being a Mahê, Vasâkha year itself, and of having a Thursclay as the week day answoring to 12th Ashâclia-Sudi of the year 165 of tlje Gupta era.

In the second group of 85 yeas from A D 395 , to 480 , the only dates on which Maha Vaisâkha falls within the limit of 54 yeais preceding 480 , ane the two years 405 and 417 AD , nom which, delucting 155 , we get the yeais 250 and 262 as two now starting points for the Gupta era

First, taking 250 as the year 1 of the Gipta-kâl, the yeai 165 will be AD 414, in which year the 12th-of Ashadhe-Sudx fell on a 'I'nesday, and not on a Thursday

Next, taking 262 as the year 1 of the Gupta ela, the yeni 165 will fall in AD 414, in which year the 19th of Ashêlhn-Suit fell on a Thursday, as requued.

We have thus in the twa-groups of years, extending from AD 310 to 305 , only two dates which fulfil the two conditions of the Mahi Vassakha year, and the 12 th of Ashatha-Sucli beng a Thuisciay These two dates place the 1st yeal of the Gupta-kal'either in AD 167, or in AD 262

It is needleas to try a thind group of years, as the only possible Mahâ Vasâklıa dates would fall in AD 488 and 500 , which would place the 1st yeal of the Gupta era in AD 233 or 345 , both of which are certainly too late

When I submitted these results to my learned finend Pandit Bapu Deva, he pointed out that the 12th of Ashifllia-Such in AD 331 was a Fiday, and not a Thursday. But it is so only by the reckonng of the Suiya Suldhanta, which I have puxposely rejected in dealing with these Gupta dates, as Vaiaha Mihira, the author of the Suiya Siddianta, lived at least two centuries later than Budha Gupta, so that it is quite impossible that his conected tables could have been used in computing
the calendar of the Gupta period. My calculations have been made from the tables of Aryabhatta, according to which the 12th of AshedhaSudi in A.D 331 was actually a Thursday. I am of course aware that Aryabhatta $1 s$ also later than Budha Gupta, but as his length of year differs from that of his predecessor Parassare, by little more than half a second, the adoption of Arysbhatta's table will not affect the weak day. The case is dufferent with Varaha M2hira, as his year is considerably longer than that of Pardsara and Aryabhatta This difference was duly notıced by James Prinsep, who remarks that "Warren's Kala Sankâlita gives the beginning of the Hindu solar year invariably one day earlier than the reckoning followed in the tables of the Sudder Dewanee. This arises from his using the Tamil year of the Arya Siddhinta, while the Surya Siddhanta as used in Bengel"

In AD 331, the Hindu lum-solar year began on the 23rd February, according to Cowasjee Patell, who, throughout his chronology, has used the tables of Aryabhatta In this year the month of Bhêdrapada was intercalary, but as this month $1 s$ later than Ashâdha, the date will not be affected by the intercalation Now the 12th of Ashadha-Sudi 18 the 101st day of the Hindu luni-solar year, and as the 23rd of February was a Tuesday, the 101st day was a Thursday in AD 331, according to Aryabhatte's tables But according to Varêha Mihira, the Hındu lunısolar year began one day later, on the 24th Febraary, and consequently the 101st day would be Friday, 4th June

The iesult of this examination is that there are only two possible dates for the commencement of the Gupte era, which fulfill the conditions of the two tests which I have applied,-1amely, AD. 167 and AD 262 We have accordingly to choose between these two datee that which agrees best with some of the other conditions.

By the first date, the period of Samudra. Gupta, the son of Chandra Gupta I, the piesumed founder of the era, would fall between the year 200 and 230 AD, which agiees whth the fact that he was a contemporary of the Devaputra Shahı, Shahen Shahi, or the king of the Great Yee-chi Indo-Scythians.

By this earler period also the date of Dhiva-bhatta would fall in $166+447=613$ AD, or just 28 years before Hwen Thsang's visit to Bolabhi in 641, during his reign.

Taking the later date of A.D 262, the period of Samudra Gupta would fall about AD 290 to 330 , which would place him some considerable time after the Great Yue-chi had aheady got md of their kings and had established mulitary chefs ( 2 Satraps)

This later period also would fix the date of Dhrûa-bhatta in $261+$ $447=708$ A.D, or just 68 years after Hwen Thsang's visit, which is much too long a period for the reign of a aingle king

For these reasons I much prefer the earher date of AD 167 as the first year of the Gupta era This earher date also 18 attended by a curious coincidence, which seems to me to offer a very stiong confirmation of its acculacy This is the correspondence in time of the death of Skanda Gupta with the foundation of the Balabhi era His latest inscription is dated in S 146, or AD 312, accoiding to the earlier initial point which I have adopted But one of his silver coins in my cabinet is dated three years later, or in S 149, or A.D 315, which is within four years of the establishment of the Balabhı era I think it very probable, therefore, that the foundation of this era may have been brought about by the opportunity of Skanda Gupta's death This would agree very well with the statement of Abu Rihâu, "that the fall of the Guptas corresponded with the establushment of the Balabhi era." *

In my attempt to fix the date of the Gupta era I overlooked a very mportant insciption of Siladitya $V$, the father of Dhrava-bhatta of Balabhi This inscription is dated in S 441, while the son's insciption 1s only six years later. Supposing its dates to be recorded in the Gupta era, then Siladitya $V$ would have been relgning in $166+441=607 \mathrm{~A}$ D, and his death may be placed about AD 610, or three years befone the date of his son's inscription in S 447, or AD 613 Now Silàditye V was the tenth generation of the Balabhi kings, and if we place the foundation of the Balabhi monarchy in AD 319, the ten generations will have reigned from AD 318 to 610 , or for 202 years, which gives an average of $29 \frac{1}{4}$ years to each generation During this period there were 18 reigns, which give an average of nearly $16 \frac{1}{4}$ years to each reign

That the era used by the Balabhi kings was that of the Guptas seems to be almost certan, as the Senapati Bhataraka, the founder of the Balabhi dynasty, is said to have been the governor of Surâshtra during the last two years of Skanda Gupta's relgn If then we accept the

[^37]year A.D 319 as the date of the foundation of the Balabhi monarchy, as well as of Balabli itself, the Gupts era must be placed at least 146 years earher, or in AD 173, according to the date of Skands Gupta's latest inscription, or 149 years earlier, or in AD 170, according to the date of his latest coin. This direct succession of the Guptas by the Balabhis, already noted by Abu Rihk̂n, is confirmed by the traditions of the people, which state that, on Skanda Gupta's death, the Senapati "assumed the title of king of Surâshtia," and "founded the city of Valabhinagar" From these statements I gather that the Valabhi era must almost certandy be dated from the foundation of the city of Valabh, which followed immediately after the death of Skanda Gupta. For this reason, therefore, I think that the date of A.D 166, which I have already deduced for the begroming of the Gupta era, from the copper-plate inscriptions of Raja Hastin and his son Saukshoba, compared with the week day date of Budha Gupta's Pillar at Eran, has a better clanm for acceptance than any other that has yet been proposed

The new inscription of Jaika (which hes not yet been published) has induced Dr Buhler to fix the beginning of the Gupta era about A D 206-209 Buteven the earlier date of 206 would place Suladitya $V$ in $206+441=647$ A.D, just six years later than the visit of Hwen Thsang, who found his son Dhrava-bhatta on the throne

This inscription of Dhrûva-bhatte I had previously overlooked until my attention was drawn to it by Dr Burgess

It tells altogether in favour of any earher date, for the inscription of Dhráve-bhatta himself is dated in 447, or only six yewe later than that of his father

As the latest possible date for Sildditys $\nabla$ is 640 AD (the year before Hwen Thsang's visit), the latest possible starting point for the Gapta era 18 $640-446=194$ A.D

According to my present calculation of the initial point of the Gupta eia in AD $166=\theta$, and $167=1$, the date of Siladitya $V$ will fall in $441+166=607$ A D, and that of his son Dhrupa-bhaita in $447+$ $166=613, A D$

The published inscription of Jaika, from Morbi, is dated in the jear 585 of the Guptamal, or era of the Guptas. It records a grant made

[^38]on the occasion of a solar eclipse, but the inscription itself is dated on the 5th of Phalguna-Sudi, which was not therefore the date of the grant, as a solar eclupse can only happen on bada 14th or the last day of the waning moon According to my calculation of the initial point of the Gupta era, the year 585 will correspond with $585+166=751 \mathrm{AD}$, in which year there was an eclipse of the sun on the 25 th of August

It 18 true that this date 18 about five months earher than the actual date of the record But this in not a difficulty of any consequence, as we have a sumilar interval between the actual date of a grant and the date of ats record on copper in the Râjum inscription of Tivera Deva, king of Kosala His grant was made on the 12th of the solar month of Jyeshta, but was not recorded untıl the 8th of Kârtika, or just four days less than five months later The day of the monih I have read myself, as it is not giveu by Wilson in his Translation, see Asiatic Researches, Vol. XV The eighth day of Kartik 18 recorded both in words and in figures

## XIV -CHEDI, OR KALÂCHURI-SAMVAT.

Teere is a considerable number of inscriptions of the Kalechuri Rajas of Chedi, with varions dates from S 792 to $\mathbf{S} 934$, which, from the style of their characters, as well as from the names of other kings mentioned in them, cannot possibly be referred to the era of Vikrama The actual name of the era was duscovered by Mr Beglar in several inscriptions from the district of Raypur to the east of Nagpur In some it is named the Chedr-Samvat, and in others the KaldchurmSamvat All the then available dates have been discussed in my account of the Kalachuri inscriptions * From these I deduced that the initial point of the era must have heen A.D 249, "as that year gives the correct week days by computation for four of the recorded dates" Since then I have been able to correct two of the discrepant dates noticed in my account, while I have myself found two new dates As all of these give the correct week day when calculated from the initial point of $249 \mathrm{AD}=0$, and $250=1$, I feel satisfied that this 18 the true starting point of the Chedı era.

During my late tour in the Central Provinces I obtained the two new inscriptions of the Kalfohuri or Chedi-Samat already mentioned The date of the earlier one 18 given as Samvat 866, Marga-Sudu 9, Ravau, or "Sunday the 9th of the waing moon of Marga, 866" Taking my previously ascertanned starting point of the ora in AD 250 = 1, the date will be $866+249=$ AD 1115, in which year Jyeshta was intercalary, and the 9th of Mârga-Sudi fell on a Sunday

The date of the second inscription is Samvat 934, Karttrka-Sudu 5, Budhe, or "Wednesdey the 5 th of the waxing moon of Kârtika in the year 934" Adding 249 to 934 we get the year A.D 1183, in which the 15th of Karttilka-Sudi was a Wednesday

One of the disciepant dates, noted in my previous account, was that of the Benares inscription of Karna Deva, which I gave as "Samvat 793, Phâlgun-Badı 9th Monday" But as the 9th of Phâlgun-Badı in $793+249=$ A.D 1142 was a Sunday, I have come to the conclusion that I may perhaps have musiead 793 for 792

This conclusion was suggested to me by the fact that Wilford read the unit as 2, and that the 9th of Phâlguna-Badin the preceding year, or $792+249=$ A D 1141, was actually a Monday.

The other correction is in the day of the month in the ycar 808, which I read as Aswina-Sudi 7, instead of Aswina-Sudi 2, which a fresh examination has shown it to be As the 7th was a Saturday (as noted in my previous account), the 2nd was of course a Monday, as stated in the inscription We have thus got no less than eight dates, all of which agree in placing the initial point of the Chedı or Kalâchuır era in A.D 249-the year 250 being reckoned as 1

There are three inscriptions which give the name of "KalachuriSamvat," dated respectively in 896,898 , and 910 , but the first two only name the week day Two other inscriptions, dated in 919 and 933, give the name of "Chedr-Samiat," but they do not give the week days.

The initıal ponnt of the Chedı or Kalâchuri-Samvat is therefore satisfactorily established by the enght following inscriptions, in which the calculated week days agree exactly with the recorded ones -

| Infceription | Cused S | A D |  |
| :---: | :---: | :---: | :---: |
| Bemares | 792 | 1041 | I'halgun Badı 9, Monasy |
| Nagpur mureum | 866 | 1115 | Marga Sudi 9, Sunday |
| Rajim | 896 | 1145 | Màgha Sudi 8, Wedneadry |
| Seorinurayen | 898 | 1147 | Asmina Sudi 2, Monday |
| Tewar | 902 | 1151 | Ashûdha Sudi 1, Sunday |
| Bhera-Ghfit | 907 | 1106 | Mârgasiras Sudi, Sunday |
| Bhera-Ghat | 928 | 1177 | Magha Badi 10, Monday |
| Sahaspur | 934 | 1183 | Kartukn Suds 5 Wednesday |

I must mention, however, that there are two other inscriptions in which the calculated week day differs by one day from that recorded. These are-

| Bharhut | 909 | IL58 | Srupana Sudi 5, Wednesday, comes ont Thursday |
| :---: | :---: | :---: | :---: |
| Tewar | 928 | 1177 | Sravana-Sudı 6, Sundey, comee out Mondey |

The Rajes of Chedr are mentioned in the inscriptions of the neighbouring lungs from AD 520 downwards But the earlest Prince mentioned in their own inscriptions is Kokalla I , the contemporary of Bhoje of Kansuy, whose dates we know to have ranged from A D 875 to 900 From his time down to the close of the dynasty, the Kalâchuri Princes played a principal part in the history of Central India Their capital was at Tripura, now Tewar, six mules to the west of Jabalpur But there was an eastern branch of the family which ruled at Ratanpur, of whom very little is at present known A list of the Rajas of this family 18 gaven in the Gazetteer of the Central Provinces Some of the names correspond with those found in the inscriptions, but the dates are all wrong, as they have been referred to the Samvat of Vikramaditya, instead of to the local Cheds era of the country.

## XV.-ERA OF BALABHI.

Tri: inital point of the Balablu-kal, or era of Balabh1, is fixed by the account of Abu Rihân, as well as by the other dates recorded in Tod's inscription, to the year 319 A D According to the former, it was 241 years posteriur to the Sâka, or $78+241=319 \mathrm{AD} \quad$ Accoıring to the inscription, Sunday the 13 th Ashâdha-Badı of the yeai 945 of Srimad Balabhi, fell in the year 662 of Muhammad, 1320 of Vikiama, and 151 of the Suva Singha Samvat * The first year of the Balabhi eia was fixed by Tod by deducting 975 from 1320 , which gives 375 of the Vikrama Samvat as the year 1 of the Balabhi Samvat Then, deducting 56 from 375 , he obtained 319 AD as the equivalent in the Christian era

Now the difference between the Christian and the Vikrama starting points being nearly 57 years, the equivalent for Vikrame 375 should ber 318, and not 319 But as we know from Abu Rinan that the Balablin ena actually began in 319 , some explanation is required to show how 'Tod's erroneous factor of 56 gave the right year AD The explanation is a vely simple one,-namely, that the Vikramâditya years in the province of Gujaiat, where the inscription was found, began then, as they do now, with the month of Kdrthuce or October, and consequently the tiue factor for converting the Vikrama date into the Christian equivalent was $56 \frac{1}{4}$, or 56 as used by Tod The proof of this as equally simple The Hijra year 662 did not begin until the 4th of November 1263 A D This being the case, the mouth of Ashâdha (on June-July) of the Chinstian year 1263 had already passed by, and therefore the Ashadlir of Samvat 1320 of the Northern ieckoning cannot belong to that year But if we take the Southena reckoning prevalent in Gujeiat, then ${ }^{5} 6$ will become the nearest factoi, and Tod's 375 - 56 will give the correct year AD 319. Then deducting 56 from the given Samvat year 1320, we get AD 1264 as the concurrent Christian year This agiees exactly With the given year of Muhammad, 662, which began on 4th November 1263, and ended on the 23rd October 1264

So far as I am aware Tod's inscinption is the only one that has yet been found dated in the Balabhi era

## XVI.-SRI-HARSHA ERA.

The Sri-Hai sha-hal, or "Eia of Srı-Harbha," $1 s$ mentioned only by Ahu Rihâı. Its initıal poınt slows that it was established by the famous king $S_{11}$ Haishe Vardhans of Kanauj, from the 1st year of his reign It was used in Mathura and Kanany, and Abu Rıhin gives its initial puint from the Almanacs of Kashmir as 664 years posterior to Vikıamáditya, or 664-57 $=607 \mathrm{~A} \mathrm{D}^{*}$ I broughi to notice some years ago one uscription of Bhoja Deva of Kanauj, whech is certanly dated in this era. This inscription is at Prithudaka, or Pehoa, and is dated looth in words and in figuies in the year 276 Referring this to the eia of Srı-Harsha we get $606+276=882$ A D $\dagger$

But the inscriptions found in Nepâl by Pandit Bhagwân Lâl offer still earher instances of the use of this ela $\ddagger$ The ealliest of these records, beanng the name of Ansu Varma, are dated in Samvat 34, 39, and 45 Now Ansu Varma was on the throne when the Chinese prilginn Hwen 'Ihsang visited Nepall in AD 637, which was in the very middle of his reign, as his eailiest inscisption above quoted is dated in AD 640 ( $606+34$ ) and his latest in AD 651, which was near the close of his reign, as an inscription of his successon, Jishnu Gupta, is dated in S 48, or A D 654 Three inscriptions of Siva Deva are dated respectively in S 119, 143, 145, and one of Jaya Deva in S 153, or A.D. 750. Now Jaya Deva's mother is said to have been the grand-daughter of the "Great Aditya Sena, the illustrous loid of Magadha," of whom I have an inscription dated in S 55, as I read the two figures This would place Aditya in AD 661, or 64 years prior to his grand-daughter, the wife of Siva Deva

[^39]In AD 880 the Newâr era was introduced into Nepâl by Râghaba Deva. He is the suxth Prince in the Nepal hist after Jaybe Deva, and if Jaya reigned until abouk 170 of the Haisha era, or AD 776, there would remain only 104 years to be divided over the five inteivening reigns

None of the inscriptions describe the era by name, bat call it simply Samvat But, fiom the mention of Ansu Varma as the reigning king of Nepal by Hwen Thsaog, it is quite clear that the dates whuch I have quoted must belong to the Sri-Harsha era According to the lusts Ansu had one predecessor Siva Deva Varma, who, as be belonged to the old family that had been expelled, was very probably 1 estored by the powerful king of Kanauj, whose era he adopted

There are two copper-plate mseriptions of the family of the Kanauj kengs, who leugned from about 750 to $1,000 \mathrm{AD}$ The carher plate is of Mahendra Pâla Deva, the son of Bhoja Deva, whose date I have fixed from several other inscriptions as extending fiom AD 870 to 900 The date of Mahendia's plate may be icad as 815 , which, referred to the Sri-Harsha era, would place him in AD 921 The later plate 28 of Sr Vinayaka Pâla Deva, the grandson of Mahendra Pâla Its date sepms to be 386, which would place him in A D $992^{*}$ Shortly after this, Kanauj was conquered by the Râthors, who introduced the Samvat of Vikramâdıtya

[^40]
## XVII. -HIJRA ERA

This era dates from the morning after the flight ( $\mathrm{H} i \jmath \cdot a$ ) of Muhammad from Mekka to Medina, which took place on the might of the 15 th July AD 622 The year 1, therefore, began on Friday, 16th July 622 The year is a simple lunar one of 12 lunations or lunar months, of 30 and 20 days alternately The common year, therefore, consists of only 3.44 days But as a month of $29 \frac{1}{2}$ days is somewhat less than one mean lunation, an intercalary day is added to the last month in the aud, fth, Fth, 10th, 13th, 16th, 18th, 21st, 24th, 26th, and 29th years of encl period of 30 years, so that the year consists of $354 \frac{37}{50}$ days, which makes the mean lunation $29 \frac{19}{3810}$ days, or 295305555 This differs from the mean synodical revolution of European astronomers by only 0000332 of a day The Muhammadan lunar year of $354 \frac{23}{50}$, or 3543666 days, 1 s , therefore, 0970202 of the solar year of 36525 days of the Juhan reckoning


To find whether any given year is intercalary, divide it by 30 , and if the remainder be either $2,5,7,10,13,16,18,21,24,26$, or 29 , then the year is an intercalary one of 355 days, but if it be any other number, the year is a common one of 354 days


But to save the trouble of calculation for finding on what day of the Christian era any particular Hijra date falls, I have prepared two tables, by which the corresponding date can be obtained in a much shorter time by inspection

Thus, to find the corresponding date of Timur's capture of Delhi, which he has himself recorded as "Wednesday the 8th of the and Rabi 801 A H," first look in Table XVI for the initial day of the Muhammadan year in Chistian reckoning, which was Friday the 13th September 1398. Then turn to Table XV, and look for the price of II Rabi 8, from which run the eye upwards to the horizonfone of week
days, beginning with Friday, where the intersection will be found to fall on Wednesday, thus agreeing with the week day given by Timur Next look to the Roman numerals on the right, where it will be seen that "II Rabi 8 " was the 6 th day of the 13 th week, or the 97 th day of the Muhammadan year Then calculate from the 13th September 1398 as the 1st day as follows -

| In September |  | -. |  | 18 days |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| „ October |  | $\ldots$ | - | 31 |  |
| , November | - | .. | ... | 30 | " |
| , December | - | - | -• | 18 | , |
|  |  |  |  | 97 | dars |

The corresponding Christian date was, therefore, the 18th December 1398, which, by the tables of the Chmstian calondar, was a Wednesday,

The following dates taken from several different authors agree with the tables

| A. H |  |  |  | Pag\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 42 | Muharram | $1=$ Tnesday | Baihakr, H M Ellıot, II, | 61 |
|  | 693 | Sbaban | $29=$ Tuenday | Minluid, H M Ellot, II, | 880 |
|  | 638 | Maharram | $8=$ Monday |  | 838 |
|  | 640 | Rajab | $9=$ Friday |  | 848 |
|  | 645 | Maharram | $2=$ Tharsiay |  | 847 |
|  | 655 | I Rabl | $6=$ Sunday |  | SMA |
|  | 656 | Muharram | 6 = Sunday |  | 818 |
|  | 801 | II Rabi | 8 = Wedneeday | Timur's own date of captare of Delhi, H M E , III | 448 |

Dowson erroneously gives 17th December 1398 as the European date of the captare instead of 18th The 17th December was Tuesday-
A. H 912 II Jamadi 8 Monday Brbar's Memoirb, page 201 925 Muharram 1 Monday „ 246 925 I Rabl 11 Sauday on 280 982 Safar 1 Friday $\quad$ 290 938 I Rabi 16 Friday ", 347 936 Muharram 3 Tuebday " 425 949 Rajab 5 Sunday Akbar born-Bloohmann 963 II Rabi 2 Friday Albbar placed on throne at Kalanor by Bairîm
Occasionally, however, the week days of both inscriptions and books will be found to differ one day from the week days of the tables If this should be the case in several instances of the same writer, the discrepancy must be due to his having used a slightly different order of the intercalary jears. The numbers of the intercalary years which I have used in the accompanying Tables are those of Ulugh Beg, which
are the most generally accepted,-namely-2-5-7-10-13-16-18 -21-24-26-29. But according to Jervis the Indian Almanacs give three of the numbers differently, or one in each decade of each cycle. These different numbers are 8, 19 and 27, instead of 7, 18 and 26 The result 1s, that where the years 8,19 and 27 are made intercalary, those years will begin one day earlier than in the Tables, and every day throughout each of those years will also be one day ealier In the accompanying Tables I have placed Roman numerals against the intercalary years of the accepted reckoning, and stars against the three years which differ

I have found this discrepancy of a single day in the following dates -

|  | Recorded Date, |  | Date by Tablce |  | II, 327 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A H. 630 | Safar 20 | Tuesday | Mondey |  |  |
| 634 | Rajab | Friday | Thursday |  |  |
| 882 | Muharram 1 | Wedneaday | Tresday | Pandue insenption |  |
| 899 | Ramean | Monday | Sunday | Babar's Memolrs | 7 |
| 926 | Maharram 1 | Saturday | Friday |  | 281 |
| 934 | Mnkarram | Saturday | Fridsy |  | 373 |
| 977 | 1 Rabi 17 | Wednesday | Tueadey | Jahangir born |  |
| 1000 | II Jamêdu 6 | Satarday | Eraday | Tabakata Axban |  |

It must be confessed, however, that not one of the above dates falls in the 8 th, the 19 th, or the 27 th years, so that I can only suggest carelessmess on the part of the writers as the probable explanation of the discrepancies. The following more glaring instances will be sufficient to show that even the best Muhammadan authors are not free from eirors of this kind

> Mınhêj-A. H 634, I Rabı 18 —Sunday, should be Wednesday.
> Baber-A. H.
> H.

This last mistake has been noticed by Erskine
In using the general table of the initial days of the Hura years, it is only necessary to remember that all the dates up to the beganning of A.D. 1753 are given in Julian reckoning or Old Style, and from that date in Gregorian reckoning or New Style The week days of course remain unchanged, whichever reckoning is used The correction of the calendar took place in. Engalnd in AD 1752, when eleven days were struck out after the 2nd September, making the next day the 14th instead of the 3rd This change occurred towards the end of the Hijrs year 1165 In the table I have given the beginning of the year 1166 in the New Style as Wednesday the 8th November 1752 By the Oid Style reckoning the date would have been Wednesday, 28th October

To find the day of the weak on which any given year of the Hyra began, the following rule is given by Woolhouse-

1st-Find the year of the current cycle by dividing the proposed Hijra year by 30

2nd-Divide the number of cycles thus obtained by 7, to obtain the number of the penod

Now take the year 1000 A H as an example-
Oyolea $\frac{1000 \mathrm{~A} \text { H }}{83+10}=$ current year of cycle $7 \frac{33 \text { cyoles }}{4+5=\text { number of penod }}$

Then look in the following table for the intersection of the current year of the cycle, or 10 , with the number of the period, or 5 , and it will be found that the initial day is Satunday, which is correct

| Current year of the cycle |  |  |  | Nomber of the period of $T$ cycles |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|  | 8 |  |  | Mon | 8at | Thur | Tues | S | Frid | Wed |
|  | 9 | 17 | 25 | Frid | Wod. | Mon | Sat | Thur | 'Tues | S |
| * 2 | -10 | -18 | ${ }^{*} 26$ | Tues. | B | Frid | Wed | Mcn | Sat | Thur |
| 8 | 11 | 10 | 27 | S | Frid. | Wed | Mon | Sat | Thur | Tues. |
| 4 | 12 | 20 | 28 | Thar | Tues | $s$ | Fnd | Wed | Mon | Sat |
| * 5 | -13 | - 21 | *29 | Mon | Sst | Thinr | Toen | 8 | Frid | Wed |
| 6 | 14 | 22 | 30 | Sat | Thur | Tues | S | Frid | Wed | Mon |
| -7 | 15 | 23 |  | Wed | Mon | 8st | Thur | Tues | 8 | Frid. |
|  | $\bullet 16$ | ${ }^{*} 24$ |  | S | Fnd | Wed | Mon | Sat | Thar | Tue* |

The calculation of this table is based on the fact that as the cycle consists of 30 years, the whole series of week day changes wall be exhausted in each period of $30 \times 7 \mathbf{- 2 1 0}$ years.' Thus the year 1 A H having begun on a Friday, the following yeats woutd also begin on Friday .-

0 S.

$$
\begin{aligned}
& \text { A. H } 1=\text { Friday, 16th July } 622 \text { A D } \\
& 211 \text { = Friday, 13th Apri } 826 \text {, } \\
& 421=\text { Friday, 9th January } 1030 \text { " } \\
& 631 \text { = Friday, 7th October } 1233 \text {," } \\
& 841=\text { Friday, 5th July } 1437 \text { " } \\
& 1051 \text { = Friday, 2nd April } 1641 \text { " } \\
& 1261 \text { - Friday, 10th January } 1845 \text { N S }
\end{aligned}
$$

As the calendar was corrected in England in A. D. 1752, during the currency of the Hijra year 1165, the last entry is given in New Style, or Gregoraan reckoning

But the initial week day of any gaven year of the Hijra can also be obtained by a short calculation, starting from any cne of the above periods Thus taking the year 1000 A $H$ as before, and remembering that the intercalary days are inserted in the following years of each cycle-

$$
\begin{array}{lllllll}
2 & 5 & -7 & 10-13-16-18-21 & 24 & 26 & 29
\end{array}
$$

The calculation is as follows -
1000 A H. $-841=159$ years
$\times \quad$ i $=$ No of days in each vear in exoess of 50 weeks
636 days
150 yearn =5 cyoles - 55 days at 11 intercalary days por cyole of 30 yeara
In 9 years over $\delta$ oycles $=3$ intercalary days [2nd, 5 th, 8 th years]

Total 694 days

$$
+7-
$$

Weekn $98+1$ day - Saturdisy
that 18, one day over Friday $=$ Saturday, the same as denved from Woolhouse's Table*

When a full table 18 not at hand for finding a date by simple inspection, either of the above methods will be found very useful, as both are absolutely correct

[^41]
## XVIII.-THE BURMESE COMMON ERA

The conmon eia of Burma which is now in use is the luni-solar calendar, which was introluced from Iudia in AD 638 The length of the year $1 s$ exactly the same as that of the Surya Siddhânta, namely, 365875648 days The solar year is reckoned in the same way as that of the Hindus, and accordingly it now begins on the 12 th and 13th of April, which is the calculated date of the sun's entiance into Aries according to Hindu reckoning The luni-solar year has 12 lunar months of 29 and 30 days alternately, with an mitercalary month at seven fixed pernods in each cycle of 19 years The jears in which these intercalary months are inserted are the

2nd, 5th, 7th, 10th, 13th, 15th, 18th
But the extra month is always inserted in the same part of the year after the month of Wahso, and is consequently named the second Waliso The names of the 12 months are the following -

| 1 | Tigo | Chantra | Maroh-April |
| :---: | :---: | :---: | :---: |
| 2 | Kasong | Vasskika | April-May |
| $d$ | Nayoug | Jyeshthe | May-June |
| 4 | Wahso | Abhadtha | Tune July |
| 5 | Wahgoung | Brfivana | July-August |
| 6 | Touthalın | Bhâdrpaida | August September |
| 7 | Thadinkyut | Aswias | September-October |
| 8 | Tasoung mong | Kêrtaka | Outober-November |
| 9 | Natdart | Agrahayana | Norember-December |
| 10 | Payatho | Paube | December-Januery |
| 11. | Tabodweh | Maghs | January-February |
| 12 | Taboung | Phalgana | Febramry March |

The year begins with the new moon immediately preceding the commencement of the solar year, and ends with the 30th day of Taboung

The initial point of the era is Saturday the 21st March AD 638 of the Julian reckoning, or 24th March A D 638 of the Gregorian reckoning In computing any dato the calculation is much aimpler than that of the usual iules for the Hindu luni-solar year, as the reckoning
us referred to the beguning of the era, snd not to the beginning of a yuge or mahâ-yuga several thousands of years back The procese is otherwise the same as that for any day of the Hindu luni-solar year, whth the exception that the fixed position of the intercalary month saves some trouble

To ascertain whether any particular year will be intercalary or not, it is only necessary to divide the number by 19 , and if the remainder be either $2,5,7,10,13,15,18$, then an intercalary month will be added in that year; but if it be auy other number the vear will be an ordinary one.

In India the only examples of Burmese dates that have hitherto been met with are in the few Burmese inscriptions found at the Mahâbodhi temple at Buddha Gaya. Three of these, which refer to the Great Temple itself, are of so much mportance that I gladly take this opportunity of giving my readings of their dates The longest inscription is on a stone slab which was found by the Burmese embassy fixed in one of the inner walls of the Mahant's residence Three translations of it have been published,-18t, by Ratoa Pala, a Singhalese Pali scholar, 2nd, by Colonel Burney, and 3 rd, by Mr Hla Oung, a Burmese scholar. The inscription piofesses to record the history of the original buiding and the successive repains of the temple Two dates are given in figures, accompanied, in each case, by the day of the week as well as the day of the month. The following is a brief abstract of this valuable record -

1-Asoke built the first temple
2-Temple rebuilt by Naik Mahanta
3-Temple restored by Raja Sado-Meng
4-Raja Sempyu-Sakhen-tara-Mengı deputed hıs gura Srı Dhamma Râja Guna to superintend the restoration of the temple work not completed

5-Varadasi Nalk Thera petitioned the Raja to undertake the work, which was then entrasted to "the younger Pyu-Sakheng" and his minister latha

This last work was begun in the Sakka Raj year 441, on Friday the 10th of Pyadola, and finished in 448, on Sunday the 8th of Tachung Mangla (or Tesoung-Mong)

Here I have given my own reading of the dates as 441 and 448, for the following reasons

A copper galt canopy, which was found by Mr Beglar carefully buried eight fect under the ground level to the west of the Great Temple, bears two mscıptious in Burmese and mediæval Indıan characters

The Burmese inscriptron is inuch injured, but I can still tead the name of Sri Dhamma in it The Indian unseıption, wheh is nearl perfect, opens as follows -

Sam 391, Sru Dharma Raja Guru

Here the date which is very clearly inseribed can only be refeired to the Burmese common ela of AD 638, which fixes the period of Dharma Raja Guru's visit to $391+638=\mathrm{AD} 1029$ Now the account of the later mission of "the younger Pyu-Saiheng" shows that it must have followed not long after Dharma Raja Guru's Mission I therefore lead the two dates as 441 and 448 , in preference to the very much later dates of 667 and 668 , which had heen generally adopted previously I have tested all the possible readmgs of these dates as 641, 647, 661, 667, 648, and 668, by the week days mentioned in the inscription Not one of them stands this test, whereas the two dates of 441 and 448 which $I$ have adopted do actually agree with the week days recorded in the meciption The endence in favom of my readings 1s, therefore, doubly stiong The latel listory of the tomple will therefore be as follows

```
Burmese era \(391=\) A D 1929-Dharma Raja Guru's Mission
———441 = AD 1079—Restoration of temple begun by the younger Pyur
                                    Sakheng
———— \(448=\) AD 1086 -Completion of the work
```

These readings of the dates allow a period of 6 years and 10 months for the restoration, unstead of the short penod of only 10 months allowed by the former readings

The two dates noted in the inscuption coriespond, according to my calculations, with the following European dates

1 Sakka Rej year 441, Friday, 10th of Pyodola was Friday, 6th December A D 1079.
2 Sakka Haj year 448, Sunday, 8th of Tachung Mangla was Sunday, 18th Ootober AD 1096

## XIX.-NEWAR ERA.

$-0=$
The Newal era is peculiar to Nepal, where it was introduced in A.D 880 by Raja Räghava Deva Pandit Bhagwan Lal Indarji has published several insciptions dated in this era. The earliest date is $\$ 533$, or AD 1413, of Raya Jyotı Malla, who may be the Jestih Mall of Pinnep's List The next is one of Siddhi Nri-Sinha, dated in S 757, or A.D. 1637. This Prince must be the Siduhe Nara Sinha of Pinsep's List, whose reign is assigned to A.D 1654-l685 But this inscaption places him at least seventeen years earliel He was the grandson of Jayakusa Malla by lis daughter, to whom was left the district of Pitan A third and a fourth inscription furnish another correction These are records of Pratapa Malla of Kathmindu, dated in S 769 and 778, or AD 1649 and 1658, whuch serve to place this Raja seven yeais earlier than in Prinsep's List

Prinsep obtained his information fom Dr Bramley, who was Residency Surgeou in Nepal The year begins in October, and 951 years had expired in 1831. The Newar era is used upon the coins of the Newari Rajas of Bhatgaon, Kethmándu, and Patan Maraden has publiahed coins of Jaya Prakasa Malla II. of Kathmandu, dated in 8. 819 and 828, or A.D. 1699 and 1703, which agree with the dates of 1606 and 1706 given in Prinsep's List This ern was discarded in A.D. 1768 by the Gorkhe conqueror Prithi NArtyank SAh, who introuluced the use of the Saka era, which is still placed on all the coins of Nepal.

## XX.-CHÂlukya Era.

In the Châlukya insciptions the dates are generally recorded in the Sâka era But in the year Nula of the Jovian cycle of 60 years, or AD 1076,* the Châlukya king Vikramâdtrya Tribluvana Malla estabhished a new era called the Chalukya Vikrama Varsha From his own jnscription we leain that he set asside "the ancient Sakn, and established the Vikrama Saka in his own name " $\dagger$ He relgned for fifty-one years from Saka 998 to 1049 His era dates from his accession in Saka 998, or AD 1076 He was one of the most powetful of the Châlukya kıngs, and his era seems to lave been adopted by some of the neighbouring princes Thus the Kadamba king Tailapa Deva dates one of his inscriptions on " Monday, the full moon day called Herjuggi (or Aswina) of the Sarvadharı Samvatsara, which was the thinty-third year of the glornous Chalukya Vikiama Varsha" Sarvadhầi, the twenty-second year of the cycle, fell in A D 1108 in Southern India, and as it was the thirtythird yeat of the new Chalukayuera, the first year must have fallon in $1108-32=1076 \mathrm{AD}$

After the death of Vikrama in AD 1127 the power of the Chalukyas began rapidly to decline, and in Saka 1084, or A.D 1162, their throne was seized by Vijala Kalâchuri, after whach therr era would seem to have fallen into diguse

[^42]
## XXI.-ERA OF LAKSHMANA SENA.

The earliest notice of this era by name occurs in an inscription fiom Buddha Gaya published by James Pinnsep, in which the date is thus given

Srı Mat Lakshmana Sersa Deva pâdânam--atitn rôjge Sain 74, Vaısâhhr badı 12, Guran

"'The reign of Sı Mad Lakshmana Sena Deva having passed," or as Babu Râjendia Lala tianslates it-
"After the expıution of the retgn of the auspicious Lakshmana Sena Deva"

This eia, therefore, was established on the death of Lakshmana Sena, the son of Ballâla Sena, Râja of Belıgal It is still used in Tirhut and Mithila in almanacs, but alwayy along with the better known eras cither of Vikiama ol Sâka Unfortunately the people, who thus use it, know nothing about it, and the equivalent dates give slightly varying results I believe, however, that I have succeeded in clearing up the difference I number the following atatements for easy reference hereafter -

1 The earliest mention of the era 14 by Colebrooke, who speaks of "Lakslimana Sena as a renowned monarch who gave his name to an era of whach 692 years are expued" The Preface containing this statement is dated 17 th December 1796 the year in which this era was established must have been AD 1104, and AD 1105 would have been the year 1 expired
2. The next mention is by Buchanan, who says that, according to the almanacs of Mithila, AD 1810 was the 706th year of the era of Lakshmana Sena, which, as he remarks, places its beginning in A D 1104 †

3 In another place, however, he gives a slightly different statement as follows "In Mithila the year is lunar ( $\imath e$ luni-solar) and commences

[^43]on the first day after the full moon of Ashâdha Here they say that Sak was the same as Sâhvâhan, and this year 1810 is leckoned the 1732nd year of his eia It is also the 1866 th year of Samvat, who, according to them, 19 the same with Vikram In these two points they agree with the Brahmans of the South, and differ totally from those of Bengal They have still another e1a called after Lakshman, king of Gaur, and of which this is the 705th year"

4 Babu Rájendıa Lâla mentions the Sccluhtıkarvamrita as bearing the two dates of Saka 1127 and Lakshmana Sena era $2 a s a+$ cha $+n 2 n 8 a$ * The book was written by Sudihaia Dâsa, son of Vatsa Dâsa, a general under Lakshmana Sena The words expressing the date ale unfortunately defective

5 Babu Rajendra also notes that the Dânr, Saguna was written in Saka 1019, or AD 1097, by Halâyudia, the spuntual adviser of Lakshmana Sena $\dagger$ Imention this for two reasons 1 st, because it shows that Lakshmana Sena I wa, rergmong irfore A D 110 , when the era was established, and $2 n d$, because the Lakshinana must be a different prince fiom the Lakshmana of No 4, who can only lave been Lakshmana Sena II, or Lakshmaniya

6 A coppet-plate insciption of Siva Sinha Deva, Raja of Tirhut, gives the followng dates - "Lalshmuna Sumvat 293, Srávana-Sudı 7, Guzau," coupled with "Salue 1321, and Samvet 1455" The Saka date is equivalent to A.D 1399, but the Vikrama dato of 1435 gives A.D 1398 The dufference between the two dates is only 134 years unstead of 135 This difference was also noticed by Buchanan, who states that Kamalakanta, the most learned Brahman in the Rangpur district, made the Samvat era begin 134 years before that of Saka $\ddagger$ In the Mithila district he found the same, as he notes (see No 2) that the year 1810 AD was reckoned as Sake 1732 and Samrat 1866, withonly 134 years' difference As the Sake date is the correct one, I have adopted it in preference to the Samvat date, which is but little used in Bengal. But the best proof of its accuracy is the fact that it aglees with the week day mentioned in the copper-plate The dates ale Thursday the 7th Sravana-Sudi, 1321 Sake, o1 AD 1399 As the proof of thas is very ample, I give it here as another example of the geneial accuracy of the

[^44]tables for working out any luni-solar date Sake $1321=$ Kali-Yuga $4500-$


Lnni solar year beging 196626 days earlier
and as Sravana-Sud. 7th is the 125th day of the year, it fell on Thursday, 10th July 1399, O S

7 There is another inscription dated in the era of Lakshmana Sena, which also gives the week day Prinsep read it as Sam 74,* which would be equivalent to A.D 1180 and Kâli-Yuga 4281 This is the inscription referred to in the beginning of this account as being dated from the close of the reign of Lakshmana Sena But taking Prinsep's reading of the year as $S 74$, my calculation shows that the week day does not agree with Thurrsday, Versâkha-Badı 12

8 I possess a third insciption dated in Sri Mal Lakshmana Senasydtata rajye Sam 51 "In the year 51 after the close of the reign of SrıLakshmana Sena" Then follow some letters and figures which, no doubt, give the month and the day, but I have not yet been able to read them

In noticing the almanacs of Mithila, which mention this era, I have said that the equivalent dates give slightly varying results. This is even the case with the two notices of Buchanan, who in one plece gives the year 705 of the Lakshmana era as the equivalent of A.D. 1810, and in the second place, 706
9. Babu Rajendra Lêla Mitra has collected several instances of the use of this era by the people of Tirhut $\dagger$ He quotes Babu Rajakrishna Mukarji as having brought to notice the fact that it was still current

[^45]in Tirhut, and that A D 1874 was the year 767 of the Lakshmava era. Deducting 766 fiom each number we get AD 1108 as the year 1 of the era

I also obtaned several equivalent dates from some manuscript Tirhut almanacs in the possession of Pandit Babu Lal of Darbhanga

10 The oldest of these was dated in Saka 1698, and Lakshmana Sam 669, aud Vikiaina Sam 1833, equivalent to A D 1776 Deducting 668 we get A D $1108=$ the year 1 of the Lakshmana ena

11 A second almanac, dated in Lakshmana Samvat 732, gave the equivalent dates of Sake 1762, and Vikiama Samvat 1897, both corresponding with AD 1840 Deducting 731 we get AD $1109=$ the year 1 of the Lakshmana eza

12 A third almanac, dated in Lakshmana Samvat 773, gavo Saka 1802 as the equivalent coiresponding with A D 1880 Delucting 779, we get $1108=$ the year 1 of the eia

13 A fourth almanac, dated in Lakshmana Samvat 730, gave Vikrama Samvat 1895 coiresponding with A D 1838 Deducting 729 we get 1100 A.D. $=$ the yeas 1 of the era

On comparing the dates derived from the almanacs, it will be seen that not only do they diffel amongst themselves, but theie is not one of them that agrees with the date derived from the coppet-plate inscription, which places the year 1 of the ena nin AD 1107 These van ious dates are as follow -

| N | 1 | Colebrooke | A D | $1796=692$ | Ls | or | $\Delta D$ | $1105=1$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| " | 2 | Buohanan | " | 1810-708 | " | or | " | $1105=1$ |
| " | 8 | Do | " | $1810=705$ | " | or | " | $1106=1$ |
| " | 6 | Copper-plate | " | $1399=293$ | " | or | " | $1107=1$ |
| " | $\theta$ | Almaneo | " | 1874 $=787$ |  | or | " | $1108=1$ |
| " | 10 | Do | " | 1776-868 | " | or | " | 1108-1 |
| " | 12 | Do | , | $1880=778$ | " | $0^{\text {r }}$ | " | $1108=1$ |
| , | 11 | Do | " | $1840=732$ |  | or | " | $1109=1$ |
| " | 19 | Do. | " | $1838=730$ | " | or | " | 1109 - 1 |

The differences are not very great, but in dealing with the establishment of an era, the strictest accuracy is mperatively necessary. What may be the cause of these differences I can only guess at. I notice that Buchanan refers the beginning of the year to the full moon of Ashadha.* But I was informed in Tirhut that the Lakshmana Samvat
begons with 1st Mâgha-Badi, while both the Vikrama and Saka jears begin with the lst Chaitia-Sud, Babu Rêjendia also etates that the Lakshmana year is a luni-solar one, "commencing fiom the 1st of the month of Mâgha," that is, Magh-Badı 1, ol middle of January

Before closing this account I must notice a veny semous error into which Babu Rajendra has fallen about Lakshmana Sena himself After having translated the Buddha Gaya insciption dated in S 74, which declaree that the ela of Lakshmana Sena began "after the expiration" of his reign, he on the very next page makes the era date from the beginning of his reign * Thus he says, " Beginning with (A.D ) 1106 Lakshmana had a very prosperous reign of many years" And again he says, "A peilod of 30 years would not be too much and Lakshmana's reign may very farrly be assumed to have extended to the close of the fourtl decade of the 12th Century" So that the year 1706 AD was both the beginning and the end of Lakshmana's reign Agann on page 402, in lis list of the Sena Rajas, he gives AD 1106 as the beginning of Lakshinana's renga Lastly, an page 397, in speakung of the Tarpondighi inscription, which is dated in the 7th year of Lakshmana's own reign, he notes that no attempt had been made to trace the initial date of the era.

How the learned Babu came to the conclusion that the year AD 1106 was the beginning of Lakshmana Sena's reign I cannot even guess He himself publishes the notice that the Dana-Sdgara was written in Saka 1019, AD 1097, by Halâyudha, the spirıtual adviser of Lakshmana Sena This alone is eufficient to establish the fact that Lakshmana Sena was reigning at least nine years before the adoption of his era But there $1 s$ another fact recorded by one of the earlest Muhammadan historians, Minhaj-ue-Siraj, which pointe very clearly to an earlier period for the lelgn of Lakshmana Sena Tins is the statement that Lakshmaniya, the last Hindu king of Gaur, had reigned for 80 years previous to the conqueet of Bengal by Bakbtiyai Khaljı in A.D 1195

[^46]
## XXII.-SIVA-SINGHA SAMVAT

— 0 -
This ern is known ouly from its mention in Colonel Tod's inscription from Balabhi From the discussion on the date of this inscruption in my account of the Balabhi era, it will be seen that its imitial point corrosponds with AD 1114 It seems probable that it may refor to the expulsion of the Jama Rajay fiom the Penmsula ot Gujaiat

## XXIII.-FASLI ERA OF BENGAL.

The Fasla Eia owes its origin to Akbai's love of innovation It should properly be dated from the time of his own accession, or the 2nd of Rabi-us-Sânı in the Hıjra year 963, or 14th February 1556, but the actual solar reckoning of the Fash system in Bengal begins with the 1st Vasâkh of the Hindu solar year, on Saturday the 28th March, OS , or Saturday the 6th Apnl, NS * In the account published by James Pinsep, the different reckonings of the Fash caleudar in various parts of India are all noticed It is altogether a mongrel era, the first 963 years being putely lunar ones of the Hyra Calendar, after which the years are purely solar ones, the Bengah sanh beginuing with the lst of the Hındu Vaisâkh, the Fash of Northern India with the lst of the lunar Aswina, and the Vilayati with the lst of the solar Aswina

There is also a later Fasli era in the Dakhin, which was established by Shah Jahân in A.D 1636 or at 1046 The beginning of the year has been fixed by the Madias Government to the 12th of July

[^47]
## XXIV. - ILÂHI ERA

- 0

The Tấzlh Ilalız, or "Ilâhıı Era," was estabhshed by Akbar so late as the 30 th year of his reign in AH 992, oi AD 1584 The coustly Abul Fazl says, that it was established "in older to remove the perplexity that a variety of dates unavordably occasions He dislaked the woid Hijza (floght), but was at finst apprehensive of offending ignorant men, who superstitiously imagined that this era and the Muhammadan fath wele inseparable" "Amir Fateh-Ullah Shirkzi corrected the calendar fiom the tables of Ulugh Beg, making this era to begin with His Mirjesty's reign, and contemplatning the charactel of the monarch, named it Tauhl Ilaiki, or the Mighty Era.' "The years and months are both natural solar, without any intercalations The names of the months and days conespond with the ancient Persian The montlis are from 29 to 30 days each Tbere 18 not any week in the Persian month, (the) 30 days being distingushed by different namea, and in those months whin have 32 days, the last two are named Roz-o-Shab (day and mght), and $n$ older to distangunh ono from the other ane called first and second"

The Ilahi era dates from Akbar's accession to the throne, which, accoldrig to the Tabakatt-i-Akbarı, was Friday the 2nd of Rabi-us-Sani, A.H 963, or 15 th Februaly $15 \div 6,0 \mathbf{S}^{*}$ It was employed extensively, though not exclusively, on the coins of Akbar and Jahangir, and appears to have fallen into disuse eally in the reign of Shah Jahan Marsdon has published a coin of this king witl the date of Snnh 5 Ilâh, coupled with the Hıjra date of 1041 But in this case the Ilâhı date would appear to be only tho jalus, on year of the king's reign $\dagger$

In the account quoted auove fiom Abul Fazl, which Prinsep has also copied, the lengths of the months are snid to be "from 29 to 30 days each," but in the old Persian Calendar of Yazdajırd, they were

[^48]30 days each, the same as amongst the Parsis of the present day The names of the twelve months, all of which are found on the coms, are as follows -

1 -Farwardin
2-Ardi-behight
3 -Khurdâd
4-Tir

6-Mirdâd
6-Sbiriur
7 -Mhir
$8-A b E n$

$$
\begin{aligned}
& 9 \text {-Ader } \\
& 10 \text {-Da } \\
& 11 \text {-Bahman } \\
& 12 \text {-Isfandarmas }
\end{aligned}
$$

The Ilâhieia, as well as the old Persian ela, had a different name for each of the 30 days of the month-

## Days

| 1 | Hormazd |
| :--- | :--- |
| 2 | Bahman |
| 3 | Ardi bebisht |
| 4 | Shatiur |
| 6 | Anpanial |
| 6 | Khurdaid |
| 7 | Amerdád |
| 8. | Depàdar |
| 9 | Adur |
| 10 | Abȧn |

The following 18 Abdul Kâdr's account of the establishment of this era * "The ela of the Hyra was now abolished, and a new era was introduced, of which the fist year was tho year of the Emperon's accession (963). The months had the same name ns at the time of the old Persian kings, and, as given in the Nigabufgibyan, fourteer festivals also were introduced comresponding to the feasts of the Zoronstuans, but the feasts of the Musalmans and then glory wele trodden down, the Fuday prayei alone being retained, because some old, decrepit, silly people used to go to it The new era was called Târıkhı Ilâhı, or 'Divine Era' On copper coins and gold-mohure the era of the Millenium was used, as mdicating that the end of the relygion of Muhammad, which was to last one thousand years, was drawing near"

I have read somewhere that in AF 992, when the Hyra millenary began to draw towards its close, and Alsbal was meditating the establıshment of the Ilâh era, one of his courthers stated openly that the elas even of the greatest kiags did not last beyond 1,000 years In proof of this he cited the extinction of some Hindu era, which was abolished at the end of 1,000 years

[^49]
## xXV-Christinn era

— $0=$
The eia which has been adopterl ly all Chistian nations wicckoned from the supposed date of the buth of Chust, and has, therefone, been called Anno Domeme, on the "year of om Lanl" The era was first biought anto use Ly Dionybins Exiguus, a Reman Abbot, who fized the burth of Chist in the 4 jth yeal of the Julian ma, on A UC 753 of the Roman Calendar " Prevous to this, the Chustran \{"hurches had foi about a century dated foom the Diocletian era, or ven of Matris" The tiue date of the natinty is now adnutten to be furr yens callea, on in 4BC of the preacut Christian reckoning But the use of the Chistian era did not become general until AD 730, m the thme of Pope Giegoly If

The jear was the same as the Julian yean, and connsted of 365 . days, the fiaction beng amanged bv making thiee consmentue inasa of 365 days, and addmg a whol day to the 4th y ean But aiter the lapse of many centures it was discoreaed that this walue of the solar on suleieal year was too mucl. In A D 1582, when the amomint of cacese was ten days, the calendan was eonected by orinr of Pope Gsegciry XIII by staking out ten days in October from the 5th to the lith In Eingland the collection was not made until A D 1752 , when, the ellot having still fuither increased, eleven days wele stinck out fiom Sid to 14th September The true length of the yeai 1936.524210 days, lut for convemence it is made $365 \mathbf{2 4 2 5}$ days, on three days less than the Julan reekoning in 400 years This is effected by omiting the extin day in the thee odd hurdsed periods of four centuries Thus the yeas 1600 and 2000 are leap years, bat 1700,1800 and 1900, are common y ears

The accompanying tables for ascertaming the week day of any date eithen before or after Chust, and aceondug to either the Julian on Giegoian leckonmg, were piepaied by mygelt mose than twenty years ago Since then I have had ample oppoitunties of testing their useful-
uess in facilstating the very common operation of finding the week day of any given date According to my experience, their use is both more rapid and less troublesome than any otbens that I have tried Every week day is shown at once by simple inspection I have also invented the following short process for finding the initial day of any year of the Old Style or Julsan reckoning

Rule-Set down the date and add one-fourth, rejecting fractions. Deduct two years, if leap year, but only one year if an ordinary one. Divide by 7, and the remainder, counted from Sunday as 1 , will be the untial day of the year The following examplea will be sufficient. Both results agree with the table-


There is an old memorial verse, which is much used for ascertaining the initial day of each month when the mitial day of the year as known The capital letters are the Dominical letters showing the days of thei week, counting from Sunday as 1

At Dover Dwell George Bruce, Eequire, Good Chriatopher Fina, And Devid Frjer

Heic we see at once the mitial day of each month But as the same mav also be obtaned at once from an inspection of the table, the chief use of this memonal verse is when the table 18 not at hand

The tables themselves are so clear and simple that they scarcely require ary explanation But suppose it be required to find the week day of tho 20th October 1712 AD First look in Table III of the Juhran Calendar for the year 1700 AD, then run the eye down until it meets the horizontal line opposite of the year 12, and the intersection will show the initial day of the year 1712 as Tueaday Next look in Table II at top for the horizontal line of week days, beginning with Tuesday, which is the third one of the seven, and as 1712 was a leap year, look for the name of October in the night hand column. Then,
taking the 20th day of October, and running the eye upwaids until it meets the horizontal line of week days, of which Tuesday was the lst of Januaiy in that year, it will be seen that Monday was the 20th of October, as secorded at the head of the Spectator "Monday, October 20th, 1712."

As a second example let it be required to find the week day of the 7 th November 1752 after the Gregonsn reckoning or New Style had been adopted in Eugland First look in Table IV of the Gregorian Calendar for the initial day of AD 1752, which will be found to be Saturday Then with this as the first day of January look in Table II as before for the month of November and the seventh day, which will be Tuesday The Adventurer is dated "Tuesday, Nov 7th, 1752"

As a last example, I will take a atill earher date recorded by Bacon, " 1617, Feby 6th, Fuday" Here the date beang prior to the 25th March the true year was 1618, as now reckoned The mitial day in Juhan reckoning was Thursday, and the year being an ordmary one, the names of the months must be read from the left side of Table II, which gives Friday as the 6th February 1618.

# XXVI.-SAURA-MANA; 

On

## SOLAR RECKONING

Tiforetically the Hindu golar year should begin with the sua's entrance into Alles, but owing to the greater length of the Hindu year, the 1st of Vasakh has gradually receded, so that the first day of the sola year now falls on the 12 th or 13 th of Apral The Indan computations were all made fiom the beginning of the Mahâ-Yuga, and owing to the difference in the length of the solar year as laid down by AiyaWhatta and Vaîha Milila, thele 19 ofton a disciepancy of one day in the beginung of the IIndin vea in the places which make use of then differont tables The actial diffience as, however, not sur uuch, being only about onc-thud of a day in $\mathbf{5 0 0 0}$ yeara Acemding to Wrisen tho number of day's assigned by Aryabhaten to a Mahà-Yuga of 4,320,000 yeas is $1,577917, j 00$ in the south of India, and 42 more in the MSS peserved an Beugal The fomer gives a year of 3652586805 daya, and the latter of $36 ; 2 ; 8692$ days* But the Suryn Siddhanta of Vaitha Mhana gives $1,577917,823$ days to the Malni-Yugn, which makes the yean sumewhat longer, o1 8052587564 days

As the number of 1 evolutions was complete at the begnining of the Kâh-Yuga, it is not necessary to go back, as the Hindu astronomery dn, to the begraning of the Maha-Yuga It will be suffiesent to begin the computation fiom the commemeeraent of the Kâli-Yuga itself In the accompanyang Tables, Nos XI, XII, and XIII, I have given the number of days elapsed from the beginning of the Kalh-Yuga down to K Y 5100, accoldug to both computations now in use, that of the Surya Siddhanta in Northern India and that of Alyabhatta in Southern Inda The fractions of days are given un the convement foim of decimals unstead of the thoublesome ghaits, palus, and vipalas of the native astronomers

As an example of the working of the Tables I will take the year A D 1857, to find on what day the 1st Vaisâkh fell According to the

[^50]Surya Siddhanta reckoning, the Kali-Yuga year 4958 (or $3101+1857$ ) began on the 11th of April, while Wairen's Tables also give the aame date. The process in both reckonings is as fullows.-

| Surya Sudikdnta |  |  | Arya Biddhámta |
| :---: | :---: | :---: | :---: |
| Years |  | Days. | Deys. |
| 4900 | contain | $1789,767-9067$ | 1789,7678346 |
| 58 | " | 21,185 0078 | 21,184 9994 |
| 4958 | contain | 1810,9529148 | 1810,9625880 |
| Deduot constent |  | -21475 | -21475 |
|  |  | 1810,450 7670 | 1810,950-3805 |

After atriking out the weeks by dividing both by 7, there remans 17 days over, and 13 days over
As the week days are counted fiom Friday, the first day following was Saturday, which in the year 1851 A.D was the 11th of April Should the laige fiaction of 767 of a day be reckoned as a whole day, then the iuitial day of the solar year in Northern India would be Suuday, 12 th April 1857, and this I find 2 s the actual date given for Bengal in the Calcutta Gazetteer of that year

The initial day of the year having been fixed, it 28 a very sample process to tind uny particular day of a given month, by an inspection of the Table of solar months, with the collective number of days for the whole year The months themsolves are of varyiug lengths wath broken periods, but for the caleudar they ano made to consist of whole numbers Then suppose it be required to find the day of the Christian year corresponding with the l0th of Kaitika of the solar year 4958, KahYuga, a reference to the Table will show that the day required 28 the 197 th day of the year, which is to be reckoned from the 12 th of Apul as the first day A reference to the Christian Table of days shows that the 12th of April is the 71st day, to which adding 196, we get the 267th day of the Christian year, or the 22nd of November 1857.

## XXVII.-CHANDRA-MÂNA.

— $0=$
The Chandra-Mana, or luni-solar calendar of the Hindus, is a much more elaborate syetem of reckoning The object of the ChandraMana is to combine the solar and lunar reckomings, so that the years may be reckoned by the course of the sun, while the months are regulated by the revolutions of the moon For this purpose a cycle of 19 solar years was adopted, as being equal, or nearly so, to 235 lunations or revolutions of the moon of 295306 days The periods do not quite tally, as 19 solar years are equal to 69399163 days according to Varaha Muhira, and 69399149 days according to Ary abhatta, while 235 lunations are equivalent to only 69396910 days The difference is nearly onefourth of a day in 19 years

The year consists of 12 lunar months of 30 and 29 days alternately, making altogether 354 days The deficieucy of eleven days less than the solar year, as made good by the addition of seven intercalary months an each cycle of 19 years. which are inserted in the
3rd, 5th, 8th, 11th, 14th, 16th, 19th years.

As these intercalary months also consist of 30 or 29 days, the cyele of 19 years is thus made to consist of $19 \times 12=228+7=285$ lunations. The Hindu luni-solar year, therefore, agrees very closely with the Greek cycle of Meton, which also consisted of 19 solar years, or 235 lunations The seven intercalary months of Meton were inserted in the following years

$$
3, \quad 5,8,11,13,16,19
$$

The only difference between this ariangement and that of the Hindu series is in the 5 th intercalation, which was made in the 14 th unstead of in the 13th year But in spite of this close agreement, I
think it almost certain that the two cycles were independently developed, although they may perhaps have had a common origin The difference in the mode of intercalation is so great that it seems quite impossible that one can have been borrowed from the other In the Greek cycle, the intercalary month has a fixed position, while in the Indian cycle both the name and the position are constantly changing The name of the intercalary month is determined in the following manner-." When two new moons fall within the same solar month, as for instance on the list and 30th of Chaitra, then the name of Chaitra, or the corresponding lunar month, 18 repeated, the year being then intercalary with 13 months The extra month is called adhika (or added), and the other nuja (or ordinary). By the rule of the Surya Siddhanta, the intercalated month is to be placed in the middle of the ordinary month In Southern India the whole intercalary month is placed before the ordinery one

The common rule followed for intercalation is thus given by $W$ arren. When the luni-solar year begins-

| On the lat of the solar Chaitra, then Chatra will beinteroalary |  |  |
| :--- | :--- | :---: |
| On the 2nd or 3rd | Vausikn | $"$ |
| On the 4th or 5th | Jyeshtha | $"$ |
| On the 8th, 7th, or 8th | Sravana | $"$ |
| On the 9th or 10th | Bharapad | $"$ |

"It happens ance within each term of 160 years that there is no new moon in one of the last six lunar months, which from the sun being in perigee contain only 30 and 29 days each" "To obriate this, that month is expunged, while two others for the opposite cause are repeated. This double intercalary year wath its expunged month is called Kshaya Samvat-sara."

In the General Table, which gives the names of the intercalary and expunged months, I have adopted the calendar published by Cowasjee Patell. The initial days of the years I have calculated myself throughout up to A D 540 The early calculations have been made with the solar reckoning of Aiyabhatta but from 541 down to the end, according to the solar reckoning of Varaha Mihira Cowasjee Pateil's Tables are calculated accordug to Aryabhatta, whose reckoning is still used in Southern Indıa

As the luni-solar year begins with the new moon immediately preceding the 1st of the solar Faisakh, the first step to be determined is the number of anys by which the one precedes the other. For this purpow the beginang of the solar year has to be fixad, as alrearly shown
in the account of the Saura-Mana, using the Solar Ahargana of the Surye Siddhannta for the North Indian dates and Aryabhatta's Solar Ahargana for South Indian dates. The next step is to find the number of days of the luni-solar Ahargana in the given period, and to deduct this total from the number of days of the Solar Ahargana already found. The remainder is to be reduced by continued subtraction of whole lunations, untrl the last remainder 18 less than one lunation. Then that last remainder shows the exact number of days by which the new moon precedes the lst day of the Solar Vaiselkh.

As an example of the process I will take the date of Kali-Yuga 4958. or A D 1857, of which the initial days have already been found in my account of the Saura-Mâna or solar reckoning As the LumiSolar Ahargana of the Surya Sidihânta is used in the South as well as in the North, one process will be sufficient-


The new moon, therefore, precedes the beginning of the solar year by 1699 , or 17 days Theu as the 1st of the Solar Varsalkh fell on the 11th of April 1857 in North India, the new moon will have fallen on the 24th Murch, and the beginnung of the luni-solar year, or the lst Chaitra-Sudu, on the followng day or 25th March In Southern Indaa it would have been the same according to my reckoning from Aryabhatta's length of the solar year, and this also is the day given by Warren But accordngg to Cowasjee Patell, it was the 26th March.

I have tested these Tables for several dates at distant intervals and have found them correct-

1 On the 5th February B C 21 there was an eclipse visible in India By the Tables the first day of the solar year was Wednesday,

14th March, and the first day of the Mun-solar year was Tuerday the 6th March, fiom which date counting backwards $29 \frac{1}{2}$ days for the provious conjunction of the sun and moon, we get the $\mathbf{3}$ th February

2 In AD 314, on the 3rd of Mach, there was a grand eclipse of the sun visible over E Asia. Accordung to Cowasjee Patell, the first day of the luni-solar year AD. 314 was the 3rd of March

3 In A D 490, on the 7th March, there was an echpse of the sun vistble ovel S E. Asia Accordug to Cownajee Patell, the fist day of the luni-solar year was the 8th March, which is ught according to the rule that the first day of the new year is the day after the conjunction.

4 On the 4th March 1840, I saw an eclupse of the sun in $N$. India According to Cowasjee Patell, and also according to my own reckonng, the luni-solar year began on the 3rd April 1840, which 18 exactly one comjunction later

5 In my account of the Bârhaspatya-Mâta, I have given another example of the correct working of the Tables for an eclipye of the yoar 792 A.L , which is mentioned in oue of the Indian inscriptions

6 But perhaps the most striking illustration of the geneial accurncy of the Tables 18 the echpse of the moon, which 19 reconded to have happened in the month of Srâvana Samvat 1200 The msciption in whels this is found is one of "three grants of land found at UJjayaur," un which Colebrooke makes the following remarks *
"One of three grants or patents records a donation of land made by the reigning sovereign of Dharit, on the anniversary of the death of lus father and predecessor, in 1191 of the Samvat era, confirmed by the prince, his son, at the time of an eclipse of the moon in Srâvana 1200 Samvat It appears from calculation that a lumar eclupse did occur at the time- $v z z$, on the 16 th of July AD 1144, about $9 \frac{1}{2} \mathrm{PM}$, apparent time at Uyayan "

Now it is quite true, as Colebrooke says, that an eclipse of the moon did occur on the 16th July 1144, but that day wns cettanly not the full moon of Sievana in that year The true date was the 28th

[^51]July 1143, on which day was the full moon of Sravana, and also a lunar eclipse The following is the calculation according to the Tables Samvat year $1200+3044=4244$ Kall-Yuga $=$ A D 1143


Deduct constant 21475


In the North the luni-solar year begins with the new moon, or 1st day of Chaitra-Sudi, and as this is the latter half of the month, this Hindu year has the strange anomaly of beginning in the middle of a month The first half of Chaitra, or the period of the waning moon, called Badr, or Kmshna Paksha, belongs to the past year This mode of placing the Badu, or waning half of the moon, in the beginning of the month 18 known as the Krishnadr reckoming, while the opposite practice of putting the Sudl, or Sulcla Paksha, half of the moon, as the beginning of the month, $1 s$ known as the Sukladr reckoning. The names $B_{a d \imath}$ and Sudi are contractions of bakula-palesha-dına, the "day of the daik half," and suhla-paksha-duna, the "day of the bright half," the fist and last syllables only being retained

Table X shows the number of days in the Hindu lum-solar yean when not intercalary When the year is an intercalary one, and the day required falls later than the intercalary month, then 30 days must be added to the number given ir the Table

The years of intercalation being fixed by the rules laid down for the 10-year cycle, the name of the intercalated month has yat to be found As there are 30 days in six of the lunar months, while the time of one lunation is only $29 \frac{1}{2}$ days, it would of course occasionally happen that two new moons would fall in the same month, one at the beginning, and the other at the end But as this is not allowed, a
peculiar arrangement has been adopted for avoiding it. In whatever month two new moons would naturally fall, that month is doubled ; or, in other words, an intercalary month of the same name is added called Adinka Vaibakha, Adhika Srîana, \&e

To ascertain which month will be Adhika, or intercalary, Warron's Kala Sankalita should be consulted, and alyo the brief abstract given by Prinsep The process is troublesome, and in the present work I have adopted the names of the intercalary months as given by Cowasyn Patell The years of the intercalations are shown to be correct by the shifting of the initial days backwaids and forwards, all of which I hasye myself calculated

TABLE I.
CHRISTIANCALENDAR.
Week Days for one year

| COMMOV Years the Months are to be read on this side | S Mon Tu Wed Thu Frd Sat | Mo <br> Tu <br> W <br> Th <br> 「r <br> Sa <br> $s$ | Tu <br> W <br> Th <br> Fr <br> Sat <br> $\mathbf{S}$ <br> Mo | >W <br> Th <br> Fr <br> Sat <br> $\mathbf{S}$ <br> Mo <br> Tu | Th <br> Fr <br> Sat <br> 8 <br> Mo <br> Tu <br> W | $\begin{gathered} \hline \mathrm{Fr} \\ \mathrm{Sat} \\ \mathbf{S} \\ \mathrm{Mo} \\ \mathrm{Tu} \\ \mathrm{~W} \\ \mathrm{Th} \end{gathered}$ | Sat $\mathbf{S}$ $\mathbf{M o}$ $\mathbf{T n}$ W Th $\mathbf{F r}$ | LEAP YEARS the Monthe aro to be read on this anda |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| JANUARY OCTOBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | JAVtARY |
|  |  | 9 | 10 | 11 | 12 | 13 |  |  |
|  | 13 | 16 | 17 | 18 | 19 | 20 | 21 | APRIL |
|  | 22 | 23 | 24 | 26 | 26 | 27 | 28 | JULY |
|  | -9 | 30 | 31 |  | 2 |  |  |  |
| FEBRUARY |  |  |  | 1 |  | 8 | 4 |  |
|  | 5 | 6 | 7 | 8 | 9 | 10 |  | FEBRUARY |
| MaRCH | 12 | 13 | 14 | 15 | 16 | 17 | 18 | AUGUST |
| NOVCMBER | 19 | 20 | 21 | 22 | 23 | 24 | 25 |  |
|  | 26 | 27 | 28 | 29 | 30 | 31 |  | - |
| APRIL | 2 | 3 | 4 | 5 | 6 | 7 | 1 | SEPTEMBГに DECETBLI |
| JULY | 9 | 10 | 11 | 12 | $20$ | $\begin{aligned} & 14 \\ & 21 \end{aligned}$ | 1522 |  |
|  | 16 | 17 | 18 | 19 |  |  |  |  |
|  | 23 | 24 | 25 | 26 | 27 | 28 | 29 |  |
|  | 30 | 31 |  |  |  |  |  | $\square$ |
|  |  |  | 1 |  | 3 | 4 | 5 |  |
| Adrust | 6 | 7 | 8 | 9 | 10 | 11 | 12 | MAY |
|  | 13 | 14 | 15 | 16 | 17 | 18 | 19 |  |
|  | 20 | 21 | 22 | 23 | 44 | 25 | 20 |  |
|  | 27 | 28 | 29 | 30 | 31 |  |  | $\cdots$ |
|  |  |  |  |  | , | 1 | 2 |  |
| SLPTEMBLR | 3 | 4 | 5 | 6 | 7 | 8 | 9 | JU\L |
|  | 10 | 11 | 12 | 13 | 14 | 15 | 36 |  |
| DLCLMBLR | 17 | 18 | 19 | 20 | 1228 | 22 | 23 |  |
|  |  | $2 \overline{5}$ | 26 | 27 |  | 29 | 30 |  |
|  | 31 |  |  |  |  |  |  | $\cdots$ |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 |  |
|  | 7 | 8 | 9 | 10 | 11 | 12 | 17 |  |
| MAY | 14 | 15 | 16 | 17 | 14 | 19 | $\stackrel{\sim}{2}$ | OCTOBER |
|  | 21 | 22 | 23 | 21 | 25 | 26 | 27 |  |
|  | 28 | 29 | 30 | 31 |  |  |  | - |
|  |  |  |  |  |  |  | 3 |  |
| JUNE | 4 | 5 | 6 |  |  |  |  | MARCH |
|  | 11 | 12 | 13 | 14 | 15 |  | 17 |  |
|  | 18 | 19 | 20 | 21 | 22 | 23 30 | 24 | NOVEMHER |
|  | 25 | 26 | 27 | 28 | 29 | 30 | 31 |  |

TABLE II.

## JULIAN CALENDAR.

christian cemturies B. C.
A D. cheistiay ceitiuerss
E. $C$
B. 0

L $\mathbf{Y}$
L. $\mathbf{Y}$
L. $Y$
L. $\mathbf{Y}$.

L $\mathbf{Y}$
C. $\mathbf{Y}$
L. $\mathbf{Y}$


TABLE III
GREGORIAN CALEMDAR.
ombitiai cemturies BC.
A. D. chrigtial cempurim

N. B-The rultial day of each even eentury, $400 \mathrm{s00}$, ko., 3n Saturdny, that of the odd

TABLE IV．
Number of Days in the CHRISTIAN Year

| $\begin{aligned} & \text { 옹 } \\ & \text { 品苞 } \end{aligned}$ |  |  | 蔍 | $\begin{aligned} & \vec{A} \\ & \text { 4 } \end{aligned}$ | sex | 号 | $\vec{B}$ | 4 者 4 4 | $\begin{aligned} & \text { 若 } \\ & \text { 首 } \\ & \frac{8}{8} \\ & 8 \end{aligned}$ |  |  | 宮 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 32 | 60 | 91 | 121 | 102 | 182 | 213 | 244 | 274 | 305 | 335 |
| 2 | 2 | 31 | 61 | 92 | 122 | 153 | 183 | 214 | 245 | 275 | 306 | 386 |
| 3 | 3 | 34 | 62 | 93 | 123 | 154 | 184 | 215 | 246 | 276 | 307 | 337 |
| 4 | 4 | 35 | 63 | 94 | 124 | 155 | 185 | 216 | 247 | 277 | 308 | 338 |
| 5 | 5 | 36 | 64 | 93 | 125 | 156 | 186 | 217 | 248 | 278 | 309 | 838 |
| 6 | 6 | 37 | 65 | 96 | 120 | 157 | 187 | 218 | 242 | 279 | 310 | 340 |
| 7 | 7 | 38 | 66 | 97 | 127 | 158 | 188 | 219 | 250 | 280 | 311 | 341 |
| 8 | 8 | 38 | 67 | 98 | 128 | 159 | 189 | 220 | 251 | 281 | 312 | 342 |
| 9 | 9 | 40 | 68 | 99 | 129 | 160 | 190 | 221 | 252 | 282 | 313 | 343 |
| 10 | 10 | 41 | 69 | 100 | 130 | 161 | 191 | 222 | 233 | 283 | 314 | 344 |
| 11 | 11 | 42 | 70 | 101 | 191 | 162 | 192 | 223 | 254 | 284 | 31.5 | 345 |
| 12 | 12 | 43 | 71 | 102 | 132 | 163 | 193 | 224 | 255 | 285 | 316 | 346 |
| 13 | 13 | 44 | 72 | 103 | 133 | 164 | 194 | 225 | 256 | 286 | 317 | 347 |
| 14 | 14 | 45 | 73 | 104 | 134 | 165 | 195 | 226 | 257 | 287 | 318 | 348 |
| 15 | 16 | 46 | 74 | 105 | 175 | 166 | 196 | 227 | 258 | 285 | 319 | 349 |
| 16 | 16 | 47 | 75 | 100 | 136 | 167 | 197 | 228 | 259 | 289 | 320 | 350 |
| 17 | 17 | 48 | 76 | 107 | 137 | 168 | 198 | 220 | 260 | 290 | 321 | 351 |
| 18 | 18 | 49 | 77 | 108 | 188 | 169 | 199 | 230 | 261 | 291 | 322 | 352 |
| 19 | 19 | 50 | 78 | 109 | 139 | 170 | 200 | 231 | 262 | 292 | 323 | 353 |
| 20 | 20 | 51 | 79 | 110 | 140 | 171 | 201 | 232 | 268 | 293 | 321 | ง54 |
| 21 | 21 | 62 | 80 | 111 | 141 | 172 | 202 | 233 | 264 | 294 | 325 | 358 |
| 22 | 22 | 63 | 81 | 112 | 142 | 173 | 203 | 234 | 265 | 295 | 326 | 356 |
| 23 | 23 | 54 | 82 | 113 | 143 | 174 | 204 | 235 | 206 | 296 | 327 | 357 |
| 24 | 24 | 55 | 83 | 114 | 144 | 175 | 205 | 236 | 267 | 297 | 328 | 858 |
| 25 | 25 | 56 | 84 | 115 | 145 | 176 | 206 | 237 | 268 | 298 | 829 | 339 |
| 26 | 26 | 57 | 85 | 116 | 146 | 177 | 207 | 238 | 238 | 298 | 330 | 300 |
| 27 | 27 | 58 | 86 | 117 | 147 | 178 | 208 | 239 | 270 | 300 | 331 | 361 |
| 28 | 28 | 89 | 87 | 118 | 148 | 179 | 208 | 240 | 271 | 301 | 332 | 362 |
| 20 | 29 |  | 88 | 118 | 149 | 180 | 210 | 241 | 272 | 302 | 333 | 868 |
| 30 | 30 |  | 89 | 120 | 150 | 181 | 211 | 242 | 273 | 803 | 834 | 864 |
| 31 | 81 | － | 90 | － | 151 |  | 212 | 243 |  | 504 | ， | 865 |

TABLE $\nabla$.
ATTIC CALENDAR
Omatted dnys on the Macedonten rycle of 19 wears


TABLE VI

## INITIAL DATES

Of tom Attic and Macelonzan Cycles of Meton preceding the Era of the Seleukuda.


The 7th Atho Jear of Maton's Cycle onded at Midsummer, 810 B. 0

Intual Days-CYCLE OF METON

| $\left[\begin{array}{l} \text { Dass } \\ \text { no } \\ \text { Year } \end{array}\right.$ | $\left.\left\lvert\, \begin{array}{c} \text { Year } \\ \text { in } \\ \text { Cycle } \end{array}\right.\right\}$ | $\frac{\mathrm{An}}{\mathrm{Sel}}$ | $\begin{gathered} \mathrm{I} \\ \text { CYCLE. } \end{gathered}$ <br> B C |  | $\begin{gathered} \text { II } \\ \text { CYCLE } \end{gathered}$ <br> в $\mathbf{c}$ | $\begin{array}{\|c\|} \mathrm{An} \\ \text { Sel } \end{array}$ | III <br> cycter <br> B C |  | $$ | $\underset{\text { cel }}{\text { An }}$ | $\stackrel{v}{\text { CYCLE }}$ | Sn | vI cycle. <br> B $\mathbf{c}$ |  | $\begin{aligned} & \text { VIII } \\ & \text { CYCLE } \\ & \text { B C } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\left\lvert\, \begin{array}{\|c} \text { Days } \\ 355 \end{array}\right.$ |  | 3 | 3 Oct | 22 | 13 Oct 291 | 41 | 13 Oct 272 | co | 13 Oct *253 | 79 | 234 |  | 14Oct 213 | 117 | 140ct 196 |
| 354 |  | 4 | $20 \mathrm{ct} * 303$ | 23 | 3 Oct 290 | 42 | $3{ }^{3} \mathrm{ct} 271$ | 61 | $130 \mathrm{cts} 2 \mathrm{z}^{2}$ | 80 | 3 Oct *233 |  | 4 Oct 214 | 18 | 4 Oct 195 |
| 38 | E | 5 | 21 Sep 308 | 24 | 21 Sep *289 | 43 | 22 Sep 270 | 62 | 22 Sep 231 | 81 | 22 Sep 232 |  | \| 22 Sep *213 | 119 | 23 Sep 194 |
| 35t |  | 6 | 10 Oct | 25 | 10 Oct 288 | 44 | 6 | 63 | 11 Oct 209 | 82 | 11 Oct 231 | 101 | 1110 Ot 212 | 120 | 11 Oct *193 |
| 384 |  | 7 | 29 Sep 306 | 20 | 29 Sep 287 | 45 | 29 Sep 269 | $6 \pm$ | ' 29 Sep *249 | 63 | ${ }^{3} \mathrm{SCp} 230$ | 102 | 30 Sep 211 | 121 | 30 Sep 192 |
| 354 |  | 8 | 17 Oct *305 | 27 | 18 Oct 286 | 46 | 18 Ort 267 | 65 | 15 Oet 24 | sq | 18 Oct *239 | 103 | 19 Oct 210 | 122 | 19 Oct 191 |
| 30.5 | vi | 9 | 6 Oct 304 | 28 | 6 Oct ${ }^{\text {288 }}$ | 47 | 70 ct 266 | ${ }_{6} 6$ | \% Oct 24 | 8 | 7 Oct 228 | 104 | 4, i Oct ${ }^{209}$ | 123 | 8 Oct 190 |
| ${ }^{884}$ | E viu | 10 | ${ }^{29}$ Sep 30.1 | 29 | 26 Sep 284 | 48 | $20 \mathrm{Sep}{ }^{265}$ ) | 6 | 27 Sep 240 | s6 | $2{ }^{2} \mathrm{Sep} 227$ |  | 27 Sep 208 | 124 | $27 \mathrm{Sep}{ }^{189}$ |
| 954 |  | 11 | 15 Oct 302 | 30 | 1500 t 283 | 49 | $1{ }^{15} 0 \mathrm{ct} 26 t$ | cs | 150ct *2t; | 87 | 16 Oct 221 | 100 | 0 1bOLt 207 | 126 | 16 Oct 188 |
| 3 |  | 12 | ct *30 | 31 | + Oct 282 | 50 | $\pm$ Oct 21 | 69 | 4 Oct 24 | 25 | 4 Oct *22is |  | 5 Oct 200 | 126 | 5 Oct 187 |
| ${ }^{8} 85$ |  | 13 | 22 Sep 300 | 32 | 22 Sep *281 | 51 | 23 Sep 202 | i0 | 2 S Sep $2+3$ | 83 | 23 Sco 234 | 103 | 8 23 -ep *205 | 127 | 24 Sep 156 |
| 354 |  | 14 | 12 Oct 299 | 33 | 12 Oct 280 | 62 | 12 Oct *201 | 7 | 13 Oct 242 | 90 | 13 Oct 223 | 109 | $\left.\right\|^{13}$ Oct 204 | 128 | 13 Oct * 185 |
| 384 | E $\times$ | 18 | 1 Oct 298 | 34 | 1 Oct 279 | 53 | Out | i2 | 1 Oct *241 | 91 | 2 Oet 222 | 110 | 2 Oct 203 | 129 | 2 Oct 184 |
| 351 |  | 16 | 19 Oct ${ }^{297}$ | 35 | 20 Oct 278 | $5 \pm$ | 20 Oct | 7 | 20 Oct 240 | 2 | $\left.\right\|^{20}$ Oct *231 |  | 21 Oct 202 |  | 21 Oct 183 |
| 4 |  | 14 | 8 Oct 296 | 36 | 8 Oct *277 | 35 | 90 ct 258 | is | 9 Oct 219 | 93 | 9 Oct 220 | 112 | 2 -9ut *201 | 131 | 10 Oct 182 |
| 984 | E | 15 | 27 Sep 295 | 37 | 27 Sep 276 | 56 | ${ }^{27}$ Sep * ${ }^{\text {2 }} \mathbf{5} 7$ | 75 | 28 Sep 238 | 94 | ${ }^{28}$ Sep 219 | 13 | 328 Sep 200 | 132 | 28 Sep *181 |
| 85t |  | 19 | 16 Oct 294 | 38 | 16 Oct 275 | 57 | 256 | 76 | 16 Oct *237 | 95 | 17 Oct 218 | 114 | 17 Oct 193 | 133 | 17 Oct 180 |
| 38 | ${ }^{\text {x }} \mathbf{1}$ | 20 | 4 Oct *293 | 39 | 5 Oct 274 | 58 | 5 Out 2ja | 7 | 5 Oct 236 | 96 | 5 Oct *217 | 115 | 6 Ott 198 | 134 | 6 Oct 179 |
| 98 | E | 21 | 24 Sep 292 | 40 | 25 Sep 2 | 59 | 25 Sep 254 | 78 | 25 Sep 235 | 97 | 23 Sep 216 | 116 | 6 6 26 Sep ${ }^{19} 97$ | 135 | 26 Sep 178 |

[^52]TABLE VII.-(Contd)
SELEUKIDANERA. Intial Days-CYCLE OF METON

| $\left\{\begin{array}{l} \text { Days } \\ \text { hat } \\ \text { car } \end{array}\right\}$ | $\begin{gathered} \text { Years } \\ \text { of } \\ \text { Cycle. } \end{gathered}$ | An Sul | VIII CYCLE | $\begin{aligned} & \text { An } C \\ & \text { Sel } \end{aligned}$ | $1 \times$ <br> CYCLE <br> B C | $\begin{aligned} & \mathrm{Ann}^{\mathrm{C}} \\ & \mathrm{Sul} \end{aligned}$ | $\underset{\text { CYCLE }}{\mathrm{X}}$ |  | XI cycle <br> B C |  | XII cycle |  | $\begin{array}{ccc} \substack{\text { XIIII } \\ \text { CYCLE }} & \\ & \text { B C } \end{array}$ | ${ }_{\text {An }}^{\text {And }}$ | x 1 y <br> cycle <br> B C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Das |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 355 |  | 136 | 140 t * 17 T | 153 | 150 ct 1 13 | 174 | $1500{ }^{139}$ | 194 | ; Oct 120 | 212 | $150 \mathrm{ct}{ }^{\prime} 101$ | 231 | Oct 82 | 250 | 16 Oct 63 |
| S54 |  | 137 | Ot 176 | 150 | 4 Out 1177 | 175 | ${ }^{5} \mathrm{O}$ Ot 138 | 191 | 6 Oct 119 | 213 | 6 Oct 100 | 232 | 50 ct *81 | 251 | 6 Oct 62 |
| 384 | E | 118 | ${ }^{23} \mathrm{Sep} 175$ | 197 | 23 hep 156 | 76 | 21 Sep *17 | 195 | 24 Sep 118 | 14 | 21 Sep 90 | 23 | 24 Sep 80 | 252 | $24 \mathrm{Sep}{ }^{\text {-61 }}$ |
| 35 |  | 139 | 12 Oct 174 | 158 | 120 ct | 177 | Oct | 19\%, | at * 117 | 215 | 13 Oet 98 | 234 | 13 Oct iy | 2 S 3 | 13 Oct 60 |
| 38 |  | 140 | 30 Sep*1is | 179 | 1 Oct lit | 178 | 10 cc 135 | 197 | 1006116 | 216 | 1 Oct *97 | 235 | 2046 | 254 | 2 Oct 59 |
| 354 |  | $1+1$ | 19 | tho | 14 Oct. ${ }^{\text {P }} 51$ | 179 | 20 Oct 14 | 198 | 20 Oct 115 | 17 | 20 Oct 96 | 236 | 20 Oct 77 | 235 | 21 Oct 68 |
| 35 |  | $1 \pm$ | 8 Oct | 161 | 3 Oct | 180 | at *13t | 191) | 9 Oet 114 | 218 | 9 Oct 95 | 237 | 9 Oct 78 | 250 | 9 Oct. *67 |
| ${ }^{384}$ | E vim | 143 | 23 Sep 170 | 16 | 28 Sep 161 | 151 | 28 Sep 132 | 210 | 28 Sep "114 | 219 | 29 Scp 94 | 238 | 29 Sep 75 | 257 | 29 Sep 56 |
| 354 | 18 | 144 | 16 Out | 19.1 | 17 Oct 150 | 182 | 17 Oct 131 | 201 | 17 Oct. 112 | 220 | $170 \mathrm{ct}{ }^{4} 93$ | 239 | 18 Oct 74 | 258 | 18 Oct 65 |
| 35 |  | 145 | 5 Oct 11 | 161 | $50 . t * 149$ | 183 | 6 Oct | 202 | 0 | 21 | ${ }_{6} 6$ ct 92 | 240 | 6 Oct *i3 | 2515 | 7 Oct 6t |
| 33 | E | 140 | 24 Scp 167 | $16 \%$ | 24 Sep 188 | 184 | 24 Sep *129 | 203 | 25 Sep 110 | 222 | 25 Sep 91 | 241 | $26 \mathrm{Sep} \quad 72$ | 260 | $25 \mathrm{Sep}{ }^{63}$ |
| 324 |  | 147 | $1+$ | 169 | 14 Ocr | 155 | 1\% at 12s | 204 | $110.6{ }^{1010)}$ | 22.31 | 150 ct | 212 | 15004 | 261 | 15 Oot. 52 |
| 384 | E. 1 | 148 | 2 Oct *16 | 167 | 304 | 186 | , | 0 | 3 Oct. 108 | 24 | 3 Oct. *9 | 213 | 4 Oct | 26. | 4 Oct 51 |
| 36 |  | 149 | Oct | 168 | $210 \mathrm{ct}$. *145 |  | $230 \mathrm{ct}$. |  | 22 Oct 107 | 225 | $220 \mathrm{ct} \quad 88$ | 24 | 22 OLt *69 | 243 | 23 Oct 50 |
| 35 | xv | 150 | ct | 169 | ct | 185 | 10 Oot * $12 \overline{1}$ | 207 | 11 Oct 106 | 226 | 110 cts 87 | 245 | 11 Ott 68 | 204 | 11 Oct * 19 |
| 384 | E. | 51 | 29 Sep 162 | 150 | 29 Sep 143 | 189 | 29 Sep 124 | 208 | $29 \mathrm{Sep}{ }^{105}$ | 227 | 30 Sep 86 | 246 | 10 Sep 67 | 260 | $30 \mathrm{Sep} \quad 48$ |
| 354 | 2 | 153 | 17 Ott 161 | 171 | 180 ct 142 | 190 | 18 Ott 123 | 209 | 18 Oct 104 | 28, | 180 ct * 85 | 218 | 19 Oct 66 | 260 | 19 Oct. 47 |
| ${ }^{356}$ | 17\% | 153 | 6 Oct. 160 | 172 | ${ }_{6} 0 \mathrm{Oct}$ * $1+1$ | 191 | 7 Oot 122 | 210 | 7 Oct 103 | 229 | $70 \mathrm{ct}$. 84 | 248 | 7 Oct *5 | 267 | 8 Oet 46 |
| 38. | K. | 154 | 26 Sep 169 | 178 | 26 Sep 140 | 192 | \| 27 Sep *121| | 211 | 27 Sep 103\| | 2 | 27 Sep 83 | 249 | 27 Sep 64 | 268 | 28 Sep ${ }^{\text {P }}$ 8 |

## TABLE VII.-(Contd.)

SELEUKIDANERA.
Intral Dayz-CYCLE OF MKTON.

| $\begin{gathered} \text { Dane } \\ \text { fin } \\ \text { Year. } \end{gathered}$ | $\left\lvert\, \begin{gathered} \text { Years } \\ \text { of } \\ \text { Cyole } \end{gathered}\right.$ | $\begin{array}{\|l\|l\|} \hline \mathbf{n n} \\ \text { Sel } \end{array}$ | XV CYOLE <br> B C | $\left\lvert\, \begin{aligned} & \text { An } \\ & \text { Sel } \end{aligned}\right.$ | $\begin{gathered} \text { XVI } \\ \text { CTCLE. } \end{gathered}$ |  | XVII CYCLE |  | XVIII <br> CYCLE <br> A D | Anm | XIX <br> CYOLR <br> A D | An | XX <br> CYCLE <br> A 1 | An | XXI CYCLR <br> A. D |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Days |  | 269 | 16 Oct 44 | 288 | $160 \mathrm{ct}$. * 2 s | 307 | 17 Oct | 326 | 17 Oct 14 | 345 | 17 Oct. 33 | 36t | Oct *iz2 | 3 | 71 |
| 354 | i1 | 270 | 6 Oct 43 | 289 | Oct 24 | 308 | ${ }^{6}$ Oct *5 | 327 | Oct 15 | 16 | 7 Oct 31 | 36. | 70 ct |  | * *72 |
| 38 | ¢ | 271 | $25 \mathrm{Sep} \quad 42$ | 290 | 25 Sep 23 | 49 | ${ }^{2} \mathrm{Sep}$ | 328 | $25 \mathrm{Sep} * 16$ | 317 | 26 Sep 35 | 366 | 26 Sep | 385 | 26 Sep 73 |
| 364 |  | 272 | 13 Oct * 11 | 20 | 14 Oct 22 | 310 | 140 ct | 29 | 14 Oct 17 | 48 | 14 Oct *36 | 367 | ct |  | 74 |
| 384 |  | 273 | 40 | 292 | ct 21 | 311 | ; 0ct | 310 | 30ct 18 | 349 | 3 Oot | 368 | ct |  | ct 75 |
| 3 OL |  | 274 | 21 Oot 30 | 29 | 210 ct .20 | 312 | $210 \mathrm{ct}.{ }^{1}$ | 331 | 22 Oct 19 | 350 | 22 Oct | 369 | 220 ct 57 | 388 | 76 |
| 355 | vu | 275 | 10 Oct 38 | 294 | 10 Oct. 19 | 313 | 10 Oot A D 1 | 322 | 10 Oct *20 | 351 | 11 Oct 39 | 370 | 11 Oct 58 |  | Oot. 77 |
| 384 | E $\square^{1}$ | 276 | $29 \mathrm{Scp}{ }^{\text {* }} 37$ | 295 | 30 Sep 18 | 314 | , 0 Sep | 3.1 | $30 \mathrm{Scy} \quad 31$ | 352 | $30 \mathrm{Scy} \times 40$ | 371 | 1 Oct 59 | 390 | 1 Oct 78 |
| 364 |  | 277 | 18 Oct 36 | 296 | 180 ct | 310 | 19 Oct | 33 | 19 Oct 22 | 383 | 19 Oct 41 | 372 | 190 ct | 391 | ct. 79 |
| 354 |  | 278 | 7 Oct 35 | 297 | 70 ct | 316 | 70 ct. *t | 335 | 8 Oct 23 | J3t | ct | 373 | 8 Oct 61 |  | *80 |
|  | E $\times$ | 279 | 26 Sep 34 | 208 | 26 Sep | 317 | ${ }^{6} \mathrm{Sep}$ | 316 | 26 Sep *24 | 155 | ${ }^{27} \mathrm{Scp}$ | 74 | 27 Sep c2 |  | 27 Sep 81 |
|  |  | 280 | 15 Oct *33 | 299 | 16 Oct 1 | 318 | 160 ct | 377 | 16 Oct $2 ;$ | 356 | ${ }^{4}$ |  | 17 Oct |  | 7 Oct 82 |
| $38 \pm$ | E. m | 281 | Oct. 32 | 300 | Oct *13 | 319 | 5 Oct | 338 | Oct. 26 | 357 | 5 Out 45 | 76 | 5 Oct | 495 | Oct. 83 |
| 954 |  | 282 | 23 Oct 31 | 301 | 23 Oct 12 | 320 | 23 Oct *s | 339 | 21 Oct. 27 | 358 | 24 Oct 16 |  | 130 |  |  |
| 354 |  | 283 | 12 Oct 30 | 302 | 12 Oct. 11 | 321 | 120 ct | 310 | 12 Oct 28 | 379 | 13 Oct. 47 | 378 | 13 Oct 66 |  | Oct. 85 |
| 384 | E | 284 | 30 Sep | 303 | 1 Oct. 10 | 322 | 1 Oct 10 | 341 | 1 Oct. 29 | 300 | 1 Oct * 18 | 379 | 2 Oct 67 |  | 86 |
| 854 |  | 285 | 19 Oct 28 | 304 | 190 ct. *9 | 323 | 20 Oct 11 | 42 | 20 Oct. | 361 |  |  | 20 Oet *68 |  | 21 Oot a7 |
| 355 | xvu | 286 | 8 Oct. 27 | 305 | 80 ct | 324 | ct. *12 | 43 | 90 ct 31 | 362 | ${ }^{9}$ Oct 50 | 381 | 90 ct 69 |  | 88 |
| 384 | E. x | 287 | 28 Sep 26 | 306 | 28 Sep | 325 | 28 Sep 13 | 344 | 29 Sep *32 | 363 | 29 Sep | 82 | 29 Sep |  | 29 Sep 89 |

6,940 days an 19 yeark,
The stars deaote leap yeare of Juhan reakoning.



TABI等 VITI．
$N u m b e r$ of days un the IIndu SOLAR year

| Days |  |  | $\begin{gathered} \text { 嵒 } \\ \text { 霑 } \end{gathered}$ | $\begin{aligned} & \text { d } \\ & \text { 品 } \\ & \text { 岲 } \end{aligned}$ | $\begin{aligned} & \text { 岩 } \\ & \text { 号 } \end{aligned}$ | $\stackrel{\stackrel{\leftrightarrow}{E}}{\stackrel{E}{E}}$ |  | 最 最 E |  | $\begin{aligned} & \text { 息 } \\ & \text { 邑 } \end{aligned}$ |  | 蚛 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 32 | 63 | 0. | 126 | 17 | 158 | 218 | 247 | 277 | 306 | 336 |
| 2 | 2 | 33 | 64 | 06 | 127 | 158 | 163 | 219 | －48 | 278 | 307 | 397 |
| 8 | 3 | 34 | 6\％ | 97 | 128 | 1］ | 190 | 230 | 24） | 279 | 108 | 338 |
| 4 | 4 | 9．） | 66 | 98 | 129 | 360 | 111 | 221 | $2{ }^{2} 0$ | 280 | 309 | 339 |
| 5 | 5 | 36 | 67 | 99 | 1.0 | 1 Cl | 192 | 222 | 21 | 281 | 310 | 340 |
| 6 | 6 | 37 | 68 | 100 | 131 | $1{ }^{12}$ | 193 | 223 | 252 | 282 | 311 | 341 |
| 7 | 7 | 38 | 69 | 101 | 13. | 103 | 194 | 224 | 253 | 283 | 312 | 342 |
| 8 | 8 | 39 | 70 | 102 | 13 | 164 | 195 | 225 | 25. | 284 | 313 | 343 |
| 9 | 9 | 40 | 71 | 103 | 134 | 165 | 196 | 226 | 250 | 285 | 314 | 344 |
| 10 | 10 | 41 | 72 | 104 | 135 | 166 | 197 | 227 | 206 | 286 | 315 | 845 |
| 11 | 11 | 42 | 73 | 107 | 136 | 167 | 198 | 228 | 257 | 287 | 816 | 346 |
| 12 | 12 | 43 | 74 | 106 | 137 | 168 | 199 | 229 | 258 | 288 | 317 | 347 |
| 13 | 13 | 44 | 75 | 107 | 138 | 169 | 200 | 230 | 259 | 289 | 318 | 348 |
| 14 | 14 | 40 | 76 | 108 | 19 | 170 | ${ }^{9} 01$ | 231 | 260 | 290 | 319 | 849 |
| 15 | 15 | 46 | 77 | 109 | 140 | 171 | 202 | 232 | 261 | 291 | 320 | 850 |
| 16 | 16 | 47 | 78 | 110 | 141 | 172 | 203 | 233 | 262 | 292 | 821 | 851 |
| 17 | 17 | 48 | 79 | 111 | 142 | 173 | 204 | 234 | 263 | 298 | 322 | 352 |
| 18 | 18 | 49 | 80 | 112 | 143 | 174 | 206 | 23； | 264 | 29. | 823 | 358 |
| 19 | 19 | 60 | 81 | 113 | 144 | 175 | 206 | 236 | 265 | 295 | 324 | 384 |
| 20 | 20 | 81 | 82 | 114 | 145 | 176 | 207 | 237 | 266 | 296 | 825 | 855 |
| 21 | 21 | 62 | 83 | 115 | 146 | 177 | 208 | 238 | 267 | 297 | 826 | 356 |
| 22 | 22 | 63 | 84 | 116 | 147 | 178 | 209 | 239 | 268 | 298 | 327 | 857 |
| 28 | 28 | 64 | 85 | 117 | 148 | 179 | 210 | 240 | 269 | 299 | 328 | 358 |
| 24 | 24 | 85 | 86 | 118 | 149 | 180 | 211 | 211 | 270 | 300 | 329 | 369 |
| 25 | 26 | 86 | 87 | 110 | 160 | 181 | 212 | 248 | 271 | 301 | 380 | 360 |
| 26 | 26 | 57 | 88 | 120 | 151 | 182 | 218 | 243 | 272 | 302 | 331 | 861 |
| 97 | 27 | 58 | 89 | 121 | 162 | 183 | 214 | 244 | 273 | 303 | 332 | 362 |
| 28 | 28 | 89 | 90 | 122 | 163 | 181 | 215 | 245 | 274 | 304 | 333 | 363 |
| 29 | 29 | 60 | 91 | 123 | 154 | 185 | 216 | 246 | 276 | 305 | 334 | 364 |
| 80 | 80 | 61 | 92 | 124 | 165 | 186 | 417 |  | 276 |  | 335 | 866 |
| 81 | 81 | 62 | 93 | 125 | 166 | 187 | － |  |  |  |  |  |
| 38 |  |  | 94 |  |  |  | － | － |  |  |  |  |

INDIAN ERAS

TABLE LX.
Approximate Initial dates of Hindu SOLAR yeare.

|  |  | AN |  |  | GOR1AN |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B 0. | 3110 | 16 February | B 0 | 3100 | 20 January |
|  | 2765 | 10 - |  | 3000 | 21 - |
|  |  | 10 |  | 1500 | 16 February |
|  | 1615 | 1 March |  | 1200 | 21 - |
|  | 1385 | 3 - |  | 900 | $26-$ |
|  | 1385 | 3 - |  | 720 | 1 Maroh |
|  | 925 | 7 - |  | 360 | 7 - |
|  |  |  |  | 60 | 12 - |
|  | 580 | 10 - |  |  | 19 |
|  | 3 O 0 | $12-$ | A D | 60 | $14-$ |
|  |  |  |  | 120 | 15 |
| B. 0 | 10 | 15 - |  | 180 | 16 |
| A D | 105 | $16-$ |  | 240 | $17-$ |
|  | 220 |  |  | 300 | $18-$ |
|  |  | $17-$ |  | 360 | 19 |
|  | 335 | 18 -- |  | 420 | $20-$ |
|  |  |  |  | 480 | 21 - |
|  | 400 | 19 - |  | 540 | 22 |
|  | 065 | $20-$ |  | 600 | $23-$ |
|  |  |  |  | 660 | 24 - |
|  | 680 | 21 - |  | 720 | $25-$ |
|  | 795 | 22 - |  | 780 | $25-$ |
|  |  |  |  | 840 | 27 - |
|  | 910 | 23 —— |  | 900 | 23 - |
|  |  |  |  | 060 | 20 - |
|  | 1025 | $24-$ |  | 1020 | 30 |
|  | 1140 | 26 |  | 1080 | $31-$ |
|  |  |  |  | 1140 | 1 April |
|  | 1258 | $26-$ |  | 1200 | 2 - |
|  | 1370 | 27 |  | 1260 | 8 - |
|  |  |  |  | 1320 | 4 - |
|  | 1485 | $28 \longrightarrow$ |  | 1380 | . 6 |
|  |  |  |  | 1440 | 6 - |
|  | 1600 | 29 - |  | 1500 | 3 - |
|  |  |  |  | 1ถ̆60 | $6 \cdots$ |
|  | 1715 | $10-$ |  | 1620 | 9 - |
|  | 1830 | 31 - |  | 1680 | $10-$ |
|  |  |  |  | 1740 | 11 - |
|  | 19452060 | 1 April. |  | 1800 | $12-$ |
|  |  |  |  | 1860 | $13-$ |
|  | 2060 | 2 - |  | 1920 | 14 - |

TABLT $\mathbf{x}$
Number of days in the Hindu LUNI－SOLAR year．

| BADI | 兵 | $\begin{aligned} & \text { d } \\ & \text { 总 } \\ & \text { 峟 } \end{aligned}$ | $\begin{aligned} & \text { 莒 } \\ & \text { 昜 } \\ & \text { 日 } \end{aligned}$ |  | $\begin{gathered} \text { d } \\ \text { d } \\ \text { 岂 } \\ \text { d } \end{gathered}$ | 気 | $\stackrel{\text { d }}{\text { d }}$ | 者 品 品 | 密 | $\begin{aligned} & \text { 氮 } \\ & \text { م } \end{aligned}$ | $\begin{aligned} & d \\ & \text { 晏 } \\ & \text { 角 } \end{aligned}$ |  | 雨 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 16 | 45 | 75 | 104 | 134 | 163 | 193 | 222 | 252 | 281 | 811 | 840 |
| 2 |  | 17 | 46 | 76 | 105 | 195 | 164 | 194 | 223 | 253 | 282 | 812 | 341 |
| 3 |  | 18 | 47 | 77 | 106 | 136 | 165 | 195 | 224 | 254 | 283 | 313 | 342 |
| 4 |  | 19 | 48 | 78 | 107 | 197 | 166 | 196 | 225 | 255 | 284 | 314 | 343 |
| 5 |  | 20 | 49 | 79 | 108 | 138 | 167 | 197 | 226 | 256 | 285 | 315 | 344 |
| 6 |  | 21 | 50 | 80 | 109 | 139 | 168 | 198 | 227 | 257 | 286 | \＄16 | 345 |
| 7 |  | 22 | 51 | 81 | 110 | 110 | 169 | 199 | 228 | 258 | 287 | 917 | 346 |
| 8 |  | 23 | 52 | 82 | 111 | 141 | 170 | 200 | 229 | 259 | 288 | 818 | 347 |
| 9 |  | 24 | 53 | 83 | 112 | 142 | 171 | 201 | 230 | 200 | 289 | 819 | 348 |
| 10 |  | 25 | 54 | 84 | 113 | 148 | 172 | 202 | 231 | 261 | 290 | 320 | 340 |
| 11 |  | 26 | 55 | 85 | 114 | 144 | 179 | 203 | 232 | 262 | 291 | 321 | 350 |
| 12 |  | 27 | 56 | 86 | 115 | 145 | 174 | 204 | 233 | 263 | 292 | 322 | 351 |
| 13 |  | 28 | 57 | 87 | 116 | 146 | 175 | 205 | 234 | 264 | 293 | 323 | 352 |
| 14 |  | 29 | 58 | 88 | 117 | 147 | 176 | 206 | 235 | 265 | 294 | 324 | 853 |
| 16 |  | 30 | 59 | 89 | 118 | 148 | 177 | 207 | 236 | 266 | 295 | 325 | 354 |
| SUDI |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 1 | 31 | 60 | 80 | 119 | 149 | 178 | 208 | 237 | 267 | 296 | 326 |  |
| 2 | 2 | 82 | 61 | 91 | 120 | 150 | 179 | 209 | 238 | 268 | 297 | 327 |  |
| 3 | 8 | 83 | 62 | 82 | 121 | 151 | 180 | 210 | 239 | 268 | 298 | 328 | － |
| 4 | 4 | 84 | 68 | 98 | 122 | 152 | 181 | 211 | 240 | 270 | 299 | 329 |  |
| 5 | 5 | 35 | 64 | 94 | 123 | 153 | 182 | 212 | 241 | 271 | 300 | 330 |  |
| 6 | 6 | 86 | 65 | 85 | 124 | 154 | 188 | 219 | 242 | 272 | 801 | 381 | ＊＊ |
| 7 | 7 | 87 | 66 | 96 | 125 | 155 | 184 | 214 | 243 | 278 | 802 | 382 | ． |
| 8 | 8 | 88 | 67 | 97 | 126 | 156 | 185 | 215 | 244 | 274 | 803 | 388 | ．．． |
| 9 | $\theta$ | 39 | 68 | 88 | 127 | 157 | 185 | 216 | 245 | 275 | 304 | 384 |  |
| 10 | 10 | 40 | 68 | 89 | 128 | 158 | 187 | 217 | 246 | 276 | 305 | 335 | ＊ |
| 11 | 11 | 41 | 70 | 100 | 129 | 159 | 188 | 218 | 247 | 277 | 306 | 896 |  |
| 12 | 12 | 42 | 71 | 101 | 130 | 160 | 189 | 219 | 248 | 278 | 357 | 887 |  |
| 13 | 18 | 43 | 72 | 102 | 131 | 161 | 190 | 220 | 249 | 279 | 308 | 338 |  |
| 14 | 14 | 44 | 78 | 103 | 132 | 162 | 191 | 221 | 250 | 280 | 309 | 830 |  |
| 15 | 16 |  | 74 |  | 133 |  | 192 |  | 251 |  | 310 |  |  |

TABLE EX.
Solar Ahargana of ARYA-BHATA


TABLE XI.-(Continued).
Solar Ahargana of ARYA-BHATA

| Years. | Deys | $\bigcirc$ | Years | Daya. |
| :---: | :---: | :---: | :---: | :---: |
| 67 | 24,472 3316 |  | 100 | 96,525 8680 |
| 68 | 24,887 5909 |  | 200 | 75,0517513 |
| 69 | 25,202 8489 |  | 300 | 109,577 6042 |
| 70 | 25,568 2076 |  | 400 | 146,103 4722 |
| 71 | 25,933 3562 |  | 800 | 182,629 3403 |
| 72 | 26,298 5248 |  | 600 | 219,155 2088 |
| 78 | 25,563 8834 |  | 700 | 2656810764 |
| $7 \pm$ | 27,029 1422 |  | 800 | 292,206 9144 |
| 75 | 27,994 4010 |  | 900 | 398,732 8124 |
| 76 | 27,7596594 |  | 1000 | 365,258 6805 |
| 77 | 28,124 9181 |  | 2000 | 730,517 3611 |
| 78 | 284901768 |  | 9000 | $1098,776.0417$ |
| 79 | 28,855 4350 |  | 9100 | 1132,3019007 |
| 80 | 29,2206944 |  | 3200 | 1168,827 7777 |
| 81 | 29,585 9530 |  | 3300 | 1205,853 6457 |
| 82 | 29,951 2118 |  | 3400 | 1241,879 5137 |
| 83 | 30,316 4705 |  | 3500 | 1,278,405 3817 |
| 84 | 80,681 7298 |  | 3600 | 1314,031 2498 |
| 80 | 31,0469883 |  | 3700 | 1351,4571178 |
| 86 | 31,412 2468 |  | 3800 | 1387,982 9858 |
| 87 | 31,777 5084 |  | 3900 | 1424,508 8 b98 |
| 88 | 32,142 7640 |  | 4000 | 1461,0347222 |
| 89 | 32,508.0226 |  | 4100 | 1497,5605902 |
| 90 | 32,873•2812 |  | 4200 | 1534,0864582 |
| 91 | 33,298 5798 |  | 4300 | 1570,6123284 |
| 92 | 33,603 7985 |  | 4100 | 1607,138 1944 |
| 29 | 33,960-0571 |  | 4500 | 1543,6540627 |
| 94 | 34,934 3102 |  | 4600 | 1680,189 9304 |
| 98 | 34,699 5749 |  | 4700 | 1716,715 7984 |
| 96 | 35,064 8336 |  | 4800 | 1753,2416664 |
| 97 | 35,480.0922 |  | 4900 | 1789,767 5344 |
| 98 | 85,795 3808 |  | 5000 | 1826,203 4027 |
| 98 | 86,160.5894 |  | 8100 | 1862,8192707 |

HDUN ERAE.
TABLI XII.
Solar Ahargana of SURYA-S1DDHANTA.

| Years | Days | $\bigcirc$ | Yemin | Daym |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 3652587 |  | 34 | 12,418 7977 |
| 2 | 7305175 |  | 35 | 12,784 0564 |
| 3 | 1,095 7763 |  | 88 | 18,1493162 |
| 4 | 1,461.0550 |  | 87 | 13,514 5739 |
| 6 | 1,826 2938 |  | 88 | 16,879 8827 |
| 6 | 2,1915525 |  | 89 | 14,2460916 |
| 7 | 2,856 8113 |  | 40 | 14,610 6502 |
| 8 | 2,922.0700 |  | 41 | 14,975 6090 |
| 9 | 8,267 8266 |  | 42 | 15,3408677 |
| 10 | 8,652 5878 |  | 43 | 18,706 1265 |
| 11 | 4,0178468 |  | 44 | 16,0718852 |
| 12 | 4,683 1061 |  | 45 | 164366440 |
| 18 | 4,748 3638 |  | 46 | 16,801 9027 |
| 14 | 6,119 6226 |  | 47 | 17,1671615 |
| 18 | 5,478 6818 |  | 48 | 175824203 |
| 16 | 5,844 1401 |  | 49 | 17,897 6700 |
| 17 | 6,209 3988 |  | 50 | 18,262 9378 |
| 18 | 6,574 85ı76 |  | 81 | 18,028 1006 |
| 19 | 6,069 9188 |  | 52 | 189064838 |
| 20 | 7,805 1751 |  | 58 | 19,358 7140 |
| 21 | 7,670 4839 |  | 54 | 19,728 9728 |
| 23 | 8,085 6926 |  | 56 | 20,089 2815 |
| 28 | 8,400-9813 |  | 56 | 20,454 4808 |
| 24 | 8,7662101 |  | 57 | 20,819 7401 |
| 25 | 9,181 4669 |  | 58 | 21,185-0078 |
| 26 | 9,496 7276 |  | 59 | 21,550-2666 |
| 27 | 9,861 9864 |  | 60 | 21,915 8254 |
| 28 | 10,227 2451 |  | 61 | 22,280.7841 |
| 29 | 10,602 6039 |  | 62 | 29,646-0428 |
| 80 | 10,967 7627 |  | 68 | 23,011 8016 |
| 81 | 11,328 0214 |  | 64 | 28,876 5604 |
| 82 | 11,688-2609 |  | 66 | 28,7418191 |
| 88 | 12,068 6889 |  | 66 | 24,107 *7\% |

## TABLE XII - (Continued)

Solir Aluengenu of SURYA-SIDDHANTA

| Years | Daya | $\bigcirc$ | Years | Days |
| :---: | :---: | :---: | :---: | :---: |
| 67 | 24,472 3366 |  | 100 | 36,525 8756 |
| 68 | 248375954 |  | 200 | 730517813 |
| 69 | 25,202 8542 |  | 300 | 1095776269 |
| 70 | 25,568 1129 |  | 400 | 1461030026 |
| 71 | 25,939 3717 |  | 500 | 182,629 3782 |
| 72 | 262986304 |  | 600 | 2191552539 |
| 75 | 266538892 |  | $710)$ | 2\%50811205 |
| 74 | 27,029 1479 |  | 800 | 292,207 0052 |
| 75 | 27,39ぬ 4067 |  | 900 | 128,732 8808 |
| 76 | 27,759 6654 |  | 1000 | 365,258 |
| 77 | 28,1249241 |  | 2000 | 730,517 5140 |
| 78 | 28,490 1830 |  | 3000 | 1095,7762694 |
| 79 | 28,855 4417 |  | 8100 | 1,192,302 1+51 |
| 80 | 292907004 |  | \$200 | 1,168,828 0207 |
| 81 | 29,585 8592 |  | \$300 | ] 205,853 8964 |
| 82 | 29,051 2180 |  | 3100 | 1241,8797720 |
| 83 | 30,316 4767 |  | 1500 | 1,278,405 6477 |
| 84 | 30,681 7954 |  | 360 | 1,314,931 5233 |
| 85 | 31,046 9942 |  | 3700 | 1,981,457 8990 |
| 86 | 31,4122530 |  | 3800 | 1,987,988 2746 |
| 87 | 817775117 |  | 9 900 | 1,424,1091503 |
| 88 | 32,1427704 |  | 4000 | 1,461,035 0259 |
| 89 | 32,508 0292 |  | 4100 | 1,497,560 9016 |
| 90 | 82,879 2880 |  | 4200 | 1. 534,086-7772 |
| 91 | 332885467 |  | 4300 | 1570,6126528 |
| 92 | 33,603 8064 |  | 4400 | 1,607,198 5285 |
| 93 | 83,969 0642 |  | 4500 | 1643,6644042 |
| 94 | 34,3943230 |  | 4600 | 1,680 1902798 |
| 95 | 84,699 5818 |  | 4700 | 1716,7161555 |
| 96 | 35,064 S406 |  | 4800 | 1759,2420311 |
| 97 | 35,430 0988 |  | 4900 | 1789,7679067 |
| 98 | 35,795 3580 |  | 5000 | 1826,2937824 |
| 09 | 88,160 6188 |  | 5100 | 1,862,819 6880 |

TABLE XIII
Lunu-Solar Ahangana-SUCRYA-SIDDHANTA


TABLE XIII -(Continued)
Lum-Solar Allargana-SURYA-SIDDH ANTA


TABLE XIV
LUNATIONS

| Number | Days | Number | Days |
| :---: | :---: | :---: | :---: |
| 1 | 295300 | 34 | 1,004 0402 |
| 2 | 590612 | 85 | 1,043 5705 |
| 3 | 685918 | 65 | 1,063 1011 |
| 4 | 1181224 | 37 | 1,092 6317 |
| 5 | $1476 \overline{o b}_{29}$ | 36 | 1,122 1625 |
| 6 | 177 1830 | 39 | 1,1516932 |
| 7 | 2067141 | 40 | 1,1812236 |
| 8 | 2362447 | 41 | 1,210 7641 |
| 9 | 260 770ิ3 | 42 | 1,240 2646 |
| 10 | 2958058 | 43 | 1,269 6152 |
| $1:$ | 8248364 | 44 | 1,2998466 |
| 12 | 6549670 | 45 | 1,9268762 |
| 13 | 3638976 | 46 | 1,856 4066 |
| 14 | 4134282 | 47 | 1,367 19874 |
| 15 | 4429587 | 48 | 1,4174662 |
| 16 | 4724894 | 49 | 1,446 9986 |
| 17 | 5020201 | 50 | 1,4765294 |
| 18 | 6515506 | 51 | 1,506 0600 |
| 19 | 6610819 | 62 | 1,585 5804 |
| 20 | 690.6117 | 58 | 1,565 1210 |
| 21 | 6201429 | 54 | 1,604 6524 |
| 22 | 6496726 | 55 | 1,624 1880 |
| 23 | 6792034 | 56 | 1,688 7128 |
| 24 | 7087341 | 57 | 1,688 2484 |
| 26 | 7862647 | 58 | 1,7127740 |
| 26 | 7677982 | 59 | 1,7428046 |
| 27 | 7978262 | 60 | 1,771 8858 |
| 28 | 6268564 | 61 | 1,801 3059 |
| 29 | 6869870 | 62 | 1,880 8964 |
| 50 | 8659176 | 68 | 1,860 4270 |
| 81 | 9154462 | 64 | 1,669 9876 |
| 62 | 8449788 | 68 | 1,019 4882 |
| 68 | 8745094 | 56 | 1,949 0188 |

## TABLE XIV -(Continued)

LUNATIONS

| Number | Dars | Number | Days |
| :---: | :---: | :---: | :---: |
| 67 | 2,078 6493 | 100 | 2,953 0588 |
| 68 | 2,008 0801 | $2(\mathrm{~K})$ | 6,906 1176 |
| 69 | 2,0376106 | 900 | 8,859 2764 |
| 70 | 2,067 1411 | dus | 118122352 |
| 71 | 2,096 6716 | 600 | 14,765 2940 |
| 72 | 2,126 2023 | 609 | 17,7189527 |
| 73 | 2,165 7329 | 700 | 20,671 4115 |
| 74 | 2,185 2634 | 800 | 23,624 4708 |
| 75 | 22147940 | 90 | 26,577 5291 |
| 76 | 2,2443245 | 1000 | 20,530 5879 |
| 77 | 2,278 8551 | 1100 | 82,483 6187 |
| 78 | 2,803 3858 | 1200 | 85,4967054 |
| 79 | 2,832 9164 | 1300 | 88,989 7612 |
| 80 | 2,962 4470 | 1400 | 41,9428230 |
| 81 | 2,3919776 | 1000 | 44,295 8820 |
| 82 | 2,421 5082 | 1800 | 47,2489406 |
| 83 | 2,451 0388 | 1700 | 50,201 9994 |
| 84 | 2,4805692 | 1800 | 53,1550782 |
| 85 | 2,510 0998 | 1900 | 66,108 1170 |
| 86 | 2,589 6804 | 2000 | 59,061 1750 |
| 87 | 2,569 1610 | 2100 | 62,014 2347 |
| 88 | 2,598 8912 | 2200 | 64,067 2985 |
| 89 | 2,828 2218 | 2900 | 67,920 3523 |
| 90 | 2,667 7829 | 2400 | 70,873 4108 |
| 91 | 2,687 2836 | 2800 | 78,826 4700 |
| 92 | 2,7138188 | 2600 | 78,779 5284 |
| 98 | 2,7466442 | 2700 | 79,732 5878 |
| 84 | 2,775 9748 | 2800 | 82,685 6480 |
| 95 | 2,805 5054 | 2900 | 85,6387049 |
| 96 | 2,834 9364 | 3000 | 88,591 7688 |
| 97 | 2,864 4670 | 4000 | 118,122 3617 |
| 98 | 2,803 9976 | 5000 | 147,862 9397 |
| 09 | 2,983 8282 | 6000 | 177,183 5278 |

TABLE XV
HIJRA CALENDAR.
Mouths and Days of the Hula Year

MONTHS
Muharrum
safal

Rabar 1
rahas II

Jamaill I

Jamadi II
najab
sluaban

Ramzan

Shawal

Zulhada

ZilbajJa


TABLE XVI
HIJRA CALENDAR
Inituel Days of Higra Years


TABLE XVI -(Continued)
HIJRA CALENDAR.
Intial Days of Hzra Years.


TABLE XVI.-(Continued.)

## HIJRA CALENDAR.

Initral Days of Huァa Years


TABLT XVI,-(Continued,)
HIJRA CALENDAR
Inetral Days of Hzıra Years


TABLE XVI.-(Continued.)

## HIJRA CALENDAR.

Invtual Days of Hijra Years



EYIII
-

XXI

XXIV

XXVI
4461054 Ta 12
$*$
448 1058 Th 21 Mar
XXIX
XV-CYCLI



TABLE XVI.-(Continued.)
HIJRA CALENDAR.
Intial Days of Higra Years.


TABLE XVL.-(Continued.)
HIJRA CALENDAR.
Inttal Days of Hyra Years


TABLII XVI.-(Continued.)
HIJRA CALENDAR.
Initial Days of Hyra Years


## TABLE XVI.-(Continued) HIJRA CALENDAR.

Initıal Days of Hyra Years


TABLIF XVI.-(ContInued.) HIJRA CALENDAR.
Invtral Days of Higra Years


MABIT KFI-(Oonthone)
hiJRa oalendar.
Intial Daye of Eieira Paars.


TABLRE XYI-(Continaed)

## HIJRA CALENDAR.

Initial Days of Hijra Yeara.


TABLE XVI-(Continned)
HIJRA CALENDAR.
Invtral Days of Hura Years


## TABL XVI.-(Conthned.)

## HIJRA CALENDAR.

Initial Days of Hiyra Yeare.


TABLEE XVI-(Oonthned)
HIJRA CALENDAR.
Initial Days of Hiyra Yeare.


TABLㅍI XVI-(Concluded )
HIJRA CALENDAR.
Instral Days of Hura Years


TABLE XVII
General Table of Corresponding Dates


## 2ABLE XVI-(Continned.)

General Table of Corresponding Dates.

| B 0 | Sowne. Yent |  | Lunt-Solat- ${ }^{\text {gear }}$ |  |  |  | Juptrib-Croles. |  |  |  | $\begin{aligned} & \text { 通 } \\ & 5 \end{aligned}$ | 品 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kall | Initual | Vik | Intercal | S2k |  | 60 Y | ears | 12 |  |  |  |
|  | Yaga | Das | Sam | Month | Sat | Inital Day | s Sid | TeI | Yoars |  |  |  |
| 80 | 3072 | 14 Mar | 28 |  |  |  | 6315 | 6225 | Aawa | 47 | 288 |  |
| *29 | 73 | 13 - | 29 |  |  |  | 16 | 26 | Kart | 48 | 284 |  |
| 28 | 74 | 14- | 30 |  |  |  | 17 | 27 | Agra | 49 | 285 |  |
| 27 | 75 | 14- | 31 |  |  |  | 18 | 28 | Pansh | 50 | 288 |  |
| 26 | 76 | 14 - | 32 |  |  |  | 19 | 29 | Magh | 51 | 287 |  |
| * 25 | 77 | 13- | ${ }^{88}$ |  |  |  | 20 | 30 | Phal | 52 | 268 |  |
| 24 | 78 | 14 - | 84 |  |  |  | 21 | 91 | Chat | 53 | 289 |  |
| 23 | 79 | 14 - | 85 |  |  |  | 22 | 32 | Vais | 54 | 290 |  |
| 22 | 80 | 14 - | 86 |  |  |  | 28 | 33 | Jyesh | 55 | 291 |  |
| *21 | 3081 | 13 - | 97 |  |  |  | 24 | 84 | Sahad | 56 | 292 |  |
| 20 | 8082 | 14 Mar | 38 |  |  |  | 25 | 85 | Srâr | 57 | 293 |  |
| 19 | 83 | 14 - | 99 |  |  |  | 28 | 86 | Bhad | 58 | 294 |  |
| 18 | 84 | 14 - | 40 |  |  |  | 27 | 37 | Aswe | 69 | 295 |  |
| +17 | 86 | 18 - | 41 |  |  |  | 38 | 88 | Kort | 00 | 296 |  |
| 16 | 86 | 14 - | 42 |  |  |  | 99 | 89 | Agra | 81 | 297 |  |
| 18 | 87 | 14 - | 48 |  |  |  | 80 | 40 | Panah | 82 | 298 |  |
| 14 | 88 | 14- | 4 |  |  |  | 81 | 41 | Magh | 83 | 299 |  |
| $\cdot 18$ | 8 | 13- | 46 |  |  |  | 88 | 42 | Pral | 64 | 800 |  |
| 12 | 90 | 14- | 18 |  |  |  | 88 | 48 | Chart | 85 | 301 |  |
| 11 | 2001 | 14- | 47 |  |  |  | 84 | 44 | Vals | 66 | 802 |  |
|  | 8092 |  |  |  |  |  |  |  |  | 87 | 308 |  |
| ${ }^{\circ}$ | 28 | $18 \text { - }$ | $49$ |  |  |  | 88 | 48 | Ashad | 68 | 304 |  |
| 8 | 94 | 14- | 50 |  |  |  | ${ }^{87}$ | 47 | Scar | 89 | 305 |  |
| 7 | 95 | 14- | 51 |  |  |  | 88 | 48 | Bhed | 70 | 808 |  |
| 6 | 96 | 14 - | 52 |  |  |  | 89 | 49 | Anma | 71 | 307 |  |
| * | 97 | 13 - | 58 |  |  |  | 40 | 60 | Kart | 72 | 308 |  |
| 4 | 98 | 14- | 54 |  |  |  | 41 | 51 | Agra | 73 | 809 |  |
| 3 | 3099 | 14- | ${ }^{5} 5$ |  |  |  | 4 | 52 | Panah | 74 | 810 |  |
| 8 | 8100 | 14- | ${ }^{6} 6$ |  |  |  | 43 | 58 | Magh | 75 | 811 |  |
| ${ }^{1}$ | 8101 | 18 - | 57 |  |  |  | 4 | 84 | Phal | 78 | 812 |  |

## TABLE XVII -(Continued)

General Tuble of Comespondung Dates

| A D | Solar-Year. |  | Luni Solar Ybar |  |  |  | Jupiter-CyCles |  |  |  |  | 号 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kall <br> Yuge | Initial Day | Vik <br> S.4m | Intercal <br> Month |  | Initial Day | 60 Years |  | $\underset{\text { Years }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 1 | 3102 | 14 Mar | 68 |  |  |  | 53456 | 5255 | Chait | 77 | 813 |  |
| 2 | 03 | 14 - | 59 | Srav |  |  | 48 | 56 | Vass | 78 | 314 |  |
| 3 | 04 | 14 - | 60 |  |  |  | 47 | 57 | Jyeah | 79 | 315 |  |
| 4 | 05 | 13 - | 61 |  |  |  | 48 | 59 | Ashad | 80 | 816 |  |
| 5 | 06 | 14- | 62 | Ashad |  |  | 49 | 59 | Srâv | 81 | 817 |  |
| 6 | 07 | 14 - | 63 |  |  |  | 50 | 60 | Bhâd | 32 | 318 |  |
| 7 | 08 | $14-$ | 64 |  |  |  |  | 531 | Aswa | 83 | 818 |  |
| * 8 | 09 | 14 - | 65 | Vals |  |  | 52 | 2 | Kârt | 84 | 320 |  |
| 9 | 10 | 14 - | 66 |  |  |  | 63 | 3 | Agra | 80 | 321 |  |
| 10 | 3111 | 14 - | 67 | Stî̀ ${ }^{\text {Y }}$ |  |  | 54 |  | Paush | 86 | 322 |  |
| 11 | 3112 | 14 Mar | 68 |  |  |  | 65 | 5 | Magh | 87 | 323 |  |
| -12 | 13 | 14 - | 69 |  |  |  | 56 | 6 | Phâl | 88 | 324 |  |
| 13 | 14 | 14 - | 70 | Ashad |  |  | 57 | 7 | Chatt | 89 | 328 |  |
| $1 \pm$ | 15 | 14 - | 71 |  |  |  | 58 | 8 | Vors | 90 | 926 |  |
| 15 | 16 | 14 - | 72 | Jgesh |  |  | 59 | 9 | Jyesh | 91 | 327 |  |
| $\bullet 16$ | 17 | 14 - | 73 |  |  |  | 60 | 10 | Ashad | 82 | 328 |  |
| 17 | 18 | 14 - | 74 |  |  |  | 641 | 11 | Brár | 93 | 320 |  |
| 18 | †19 | 14 - | 76 | Kar Phad |  |  |  | 12 | BLad | 84 | 880 |  |
| 19 | 20 | 14 - | 76 |  |  |  |  | 13 | Aama | 98 | 931 |  |
| - 20 | 3121 | 14 - | 77 |  |  |  |  | 14 | Kart | 96 | 382 |  |
| 21 | 3122 | 14 Mar | 78 | Srîv |  |  |  | 15 | Agra | 97 | 833 |  |
| 22 | 23 | 14 - | 79 |  |  |  | $\varepsilon$ | 16 | Paush | 98 | 334 |  |
| 23 | 24 | 14 - | 80 |  |  |  |  | 17 | Magh | 99 | 835 |  |
| * 24 | 25 | 14 - | 81 | Ashad |  |  |  | 18 | Phal | 100 | 336 |  |
| 25 | 20 | $1 \pm$ - | 82 |  |  |  |  | 19 | Chant | 1 | 387 |  |
| 26 | 27 | 1t | 53 |  |  |  |  | 20 | Vals | 2 | 338 |  |
| 27 | 28 |  | 84 | Vniy |  |  |  | 21 | Jyesh | 3 | 336 |  |
| - 28 | 29 | 1t- | 85 |  |  |  |  | 22 | Ashad | 4 | $9+0$ |  |
| 29 | 30 | 14 - | 86 | Stâv |  |  |  | 23 | Srâ | 5 | 341 |  |
| 30 | 9181 | $14-$ | 87 |  |  |  |  | 24 | Bhed | 6 | 342 |  |

$t$ Agrahayana ormitted.

TABLE XVII--(Continued)
General Table of Corresponding Dates


TABLE XYII.-(Continued)
General Table of Comesponding Dates


## TABLIE XVII - (Continued)

General Talle of Corvesponding Dates

| A $\mathbf{D}$ | Solair Year |  | Luni Solar Year |  |  |  | Jupiter Cyclies |  |  |  |  | $\begin{aligned} & \text { 瞺 } \\ & \text { 莒 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initial Day | $\left\|\begin{array}{c} \nabla_{1 k} \\ S_{a n} \end{array}\right\|$ | Intercal Month | $\left\|\begin{array}{c} \text { Sak } \\ \text { Sal } \end{array}\right\|$ | Intial Days | 60 Years |  | $\begin{gathered} 12 \\ \text { Years } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | S Sld | Tel |  |  |  |  |
| 81 | 3192 | 15 Ma | 148 |  | 13 | Ta 8 Mar | 1 ]6 | 5425 | Kart | 67 | 403 |  |
| *92 | 93 | 15 - | $1{ }^{4} 9$ |  | 14 | Sa 25 Feb | 17 | 26 | Agra | 68 | $40 \pm$ |  |
| 93 | 94 | 15 - | 100 | Vais | 15 | Th 14 Feb | 18 | 27 | Paush | 69 | 405 |  |
| 94 | 92 | 15 - | 151 |  | 16 | We 5 Mar | 19 | 28 | Magh | 70 | 406 |  |
| 95 | 96 | 15 - | 152 | Mhad | 17 | Sa 21 Feb | 20 | 29 | Yhâl | 71 | 407 |  |
| *96 | 97 | $15-$ | 153 |  | 18 | Sa 12 Mar | 21 | 30 | Chat | 72 | 408 |  |
| 97 | 98 | 15 - | 154 |  | 19 | We 1 Mar | 22 | 31 | Vins | 73 | 409 |  |
| 98 | 3199 | 15 - | 150 | Srév | 20 | S 18 Feb | 23 | 32 | Jyerh | 74 | 410 |  |
| 99 | 3200 | 15 - | 156 |  | 21 | Sa 9 Mar | 24 | 31 | Ashad | 75 | 411 |  |
| *100 | 3201 | 15 - | 157 |  | 22 | We 26 Feb | 25 |  | Sráv | 76 | 412 |  |
| 101 | 3202 | 15 Mar | 158 | Jyeah | 23 | Mo 15 Feb | 26 | 35 | Buad | 77 | 418 |  |
| 102 | 03 | 15 - | 159 |  | 24 | S 6 Mar | 27 | 36 | Aswa | 78 | 414 |  |
| 103 | 01 | 15 - | 160 |  | 25 | Th 23 Feb | 29 | 37 | Kuit | 79 | 115 |  |
| ${ }^{*} 104$ | 05 | 10 - | 161 | Chatt | 26 | Mo 12 Feb | 29 | 38 | Agra | 80 | 416 |  |
| 105 | 00 | 15 - | 162 |  | 27 | Mo 3 Mar | 30 | 39 | Paush | 81 | 417 |  |
| 106 | 07 | $1^{5}$ - | 163 | Srav | 28 | Fi 20 Feb | 31 | 40 | Magr | 82 | 418 |  |
| 107 | 08 | 15 - | 164 |  | 29 | Ih 11 Mar | 32 | 41 | Phâl | 83 | 419 |  |
| *108 | 09 | 15 - | 167 |  | 30 | Mo 28 Feb | 33 | 42 | Chat | 84 | 420 |  |
| 109 | 10 | 15 - | 166 | Ashad | 31 | Sa 17 Feb | 34 | 43 | Vals | 85 | 421 |  |
| 110 | 3211 | 15 - | 167 |  | 32 | Fr 8 Mar | 35 |  | Jyesb | 80 | 422 |  |
| 111 | 3212 | 15 Ma | 168 |  | 33 | Tu 25 Feb | 36 | 45 | Ashad | 87 | 423 |  |
| ${ }^{*} 112$ |  | 15 - | 169 | Vais | 34 | Sa 14 Feb | 37 | 46 | Srav | 88 | 424 |  |
| 113 | 14 | 15 - | 170 |  | 35 | Sa 5 Mar | 38 | 47 | Blid | 89 | 420 |  |
| 114 | 15 | 15 - | 171 | Bbed | 36 | Tu 21 Feb | 39 | 48 | Aswa | 90 | 426 |  |
| 115 | 16 | 15 - | 172 |  | 97 | Mo 12 Mar | 40 | 49 | Kert | 91 | 427 |  |
| *116 | 17 | $15-$ | 173 |  | 38 | Sa 1 Mar |  | 50 | Agra | 92 | 428 |  |
| 117 | 18 | 15 - | 174 | Srâr | 39 | We 18 Feb | 42 | 51 | Pausb | 93 | 429 |  |
| 118 | 19 | 15 - | $17 t$ |  | 40 | Tu 9 Mai | 43 | 52 | Magh | 94 | 430 |  |
| 119 | 20 | $15-$ | 176 |  | 41 | Sa 26 Feb | 44 | 83 | Pbâl | 95 | 431 |  |
| *120 | 3221 | 15 - | 177 | Jyesh | 42 | We 15 Feb | 145 | $54 \quad 54$ | Chatt | 96 | 432 |  |

TABLE XVII－（Continued ）
General Table of Cornesponding Dutes

| A D | Solar－Yeam |  | LUNI－SOLAE－YEAR |  |  |  | Jopiter Cucles |  |  | $\begin{aligned} & \text { 気 } \\ & \text { 总 } \\ & \text { 兑 } \\ & \text { 品 } \end{aligned}$ | $\begin{aligned} & 5 \\ & \mathbf{y y} \\ & \mathbf{8} \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \mathrm{K}_{\mathrm{al}}^{1} \\ \text { Yuga } \end{gathered}$ | Intial Day | $\left\|\begin{array}{c} V_{1 k} \\ S_{a n 1} \end{array}\right\|$ | Intercal Month | SakSal | Initial Day | 60 Yeara |  | $\underset{\text { Years }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sxd | Tel |  |  |  |  |
| 121 | 3222 | 15 Mar | 178 |  | 43 | We 6 Mar | 146 | 5465 | Vars | 97 | 433 |  |
| 122 | 23 | 15 － | 179 | $\dagger$ | 44 | S 29 Feb | 47 | 56 | Syesh | 98 | 434 |  |
| 123 | 21 | 15 － | 180 | Chait | 45 | Th 12 Feb | 48 | 57 | Ashad | 99 | 435 |  |
| ＊124 | 2 n | 15 － | 181 |  | 46 | Th 3 Mar | 49 | 58 | Srav | 100 | 416 |  |
| 125 | 26 | 15 － | 182 | Srà ${ }^{\text {¢ }}$ | 47 | Mo 20 Feb | 50 | 59 | Bhâl |  | 437 |  |
| 120 | 27 | 10 － | 3 |  | 48 | $9 \quad 11 \mathrm{Maz}$ | 51 | 60 | Asma | 2 | 438 |  |
| 127 | 28 | 15－ | 184 |  | 49 | Mo 29 Feb | 52 | 551 | Kêrt | 3 | 439 |  |
| －128 | 29 | 15－ | $18 i 4$ | Ashad | 10 | Fr 17 Feb | 53 | 2 | Agra | 4 | 440 |  |
| 129 | 30 | 15 － | 186 |  | 51 | Mo 8 Mar | 54 | 3 | Papsh | 5 | 441 |  |
| 130 | 3231 | 15 － | 187 |  | 62 | Fr 25 Feb | 65 | 4 | Magh | 6 | 442 |  |
| 131 | 3232 | 1）Mar | 188 | Vais | 65 | Tu 14 Feb | 65 | 6 | Phal | 7 | 443 |  |
| ＊132 | 33 | 15 － | 189 |  | $6 \pm$ | 56 Mnr | 67 | 6 | Chait | 8 | 444 |  |
| 133 | 34 | 16 － | 190 | Blûã | 55 | Fr 21 Feh | 68 | 7 | Vals | 0 | 445 |  |
| 13i | 35 | 15 － | 191 |  | 66 | Th 12 Mar | 69 | 8 | Jyesh | 10 | 416 |  |
| 135 | 36 | 15－ | 192 |  | 57 | Mo 1 Mar | 60 | 9 | Ashad | 11 | 447 |  |
| ＊ 126 | 37 | 15 － | 193 | Srav | 53 | Fr 18 Feb | 21 | 10 | Slay | 12 | ＊ 48 |  |
| 137 | 38 | $15-$ | 194 |  | 59 | Fr 9 Mar | 2 | 11 | Phard | 13 | 449 |  |
| 138 | 39 | $15-$ | 145 |  | 60 | Tu 26 Feb | 3 | 12 | Aswa | 14 | 450 |  |
| 139 | 40 | $15-$ | 196 | Jyenh | 61 | Tu 15 Feb | 4 | 13 | Kârt | 16 | 451 |  |
| ＊ 140 | 3241 | $15-$ | 197 |  | 62 | Sa 6 Mar | 6 | 14 | Paush | 16 | 452 |  |
| $\ddagger 141$ | 3242 | 15 Mar | 198 | Aswn | 63 | We 23 Feb | 7 | 15 | Màgh | 17 | 458 |  |
| 142 |  | $15-$ | 109 |  | 64 | We 12 Feb | 8 | 16 | Phal | 18 | 45. |  |
| 143 | 44 | 15 － | 200 |  | 65 | Sa 3 Mar | 9 | 171 | Chart | 19 | 458 |  |
| ＊144 | 45 | 15 － | 201 | Srât | 66 | Sa 20 Frb | 10 | 18 | Vals | 20 | 466 |  |
| 145 |  | $15-$ | 202 |  | 67 | We 11 Mar | 11 | 19 | J yesh | 21 | 157 |  |
| 146 | 47 | 15 － | 208 |  | 68 | We 23 Feb | 12 | 20 | Ashad | 22 | 2458 |  |
| 147 | 48 | 15 － | 204 | Jyesh | 69 | S 17 Feb | 14 | 31 | Srav | 23 | 3450 |  |
| ＊148 | 49 | $15-$ | 205 |  | 70 | Th 8 Mar | 14 | 22 | Bhâd | 24 | 4． 460 |  |
| 140 | 50 | 15 － | 200 |  | 71 | Mo 25 Feb | 15 | 24 | Aswa |  | 5461 |  |
| 150 | 3251 | 15 － | 207 | Vals | 72 | Mo 14 Feb | 216 | 65 24 | Kârt | 26 | 6462 |  |

## TABLE XVII -(Continued)

General Table of Corresponding Dates


## TABLE XVII．－（Continued）

General Table of Correopondung Dates

| A D | Solar－MEar |  | Luni－Solat－FEAR |  |  |  | Jupiter－Cycles |  |  | $\begin{aligned} & \text { 畄 } \\ & \text { 总 } \\ & \text { 亳 } \end{aligned}$ |  | $\begin{aligned} & \text { 曷 } \\ & \text { 亳 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initial Day | $\begin{aligned} & V_{\mathbf{r}} \\ & \operatorname{Sam} \end{aligned}$ | Intercal Month | $\left\{\begin{array}{l} \text { Sak } \\ \text { Sel. } \end{array}\right.$ | Initual Day | 60 Years |  | $\stackrel{12}{\text { Xearg }}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 181 | 3282 | 15 Mar | 238 |  | 103 | Fr 3 Mar | 247 | 65 55 | Jyenh | 57 | 498 | 15 |
| 182 | 83 | 16 － | 239 | Srav | 104 | Tu 20 Feb | 48 | 56 | Ashad | 58 | 494 | 16 |
| 183 |  | 16 － | 240 |  | 105 | Mo 11 Mar | 49 | 57 | Srav | 59 | 495 | 17 |
| ＊184 |  | 15 － | 241 |  | 106 | Fr 28 Feb | 60 | 58 | Bhad | 60 | 498 | 18 |
| 186 |  | 15 － | 242 | Jyesh | 107 | We 17 Feh | 51 | 59 | Agwa | 61 | 497 | 19 |
| 186 |  | $16-$ | 243 |  | 108 | Tu 8 Mar | 52 | 50 | Kart | 62 | 498 | 20 |
| 187 | 88 | 16 － | 244 |  | 109 | Sa 25 Feb | 53 | 581 | Agran | 63 | 499 | 11 |
| ＊188 | 89 | 15 － | 245 | Va18 | 110 | We 14 Feb | 54 | 2 | Paubb | 54 | 500 | 22 |
| 189 | 90 | 16 － | 246 |  | 111 | We 5 Mar | 55 | 8 | Magh | 65 | 501 | 23 |
| 190 | 3291 | 16 － | 247 | Bhad | 112 | Sa 21 Feb | 68 | 1 | Phil | 66 | 502 | 24 |
| 191 | 3292 | 16 Mar | 248 |  | 117 | Fr 12 Mar | 57 | 6 | Chait | 67 | 603 | 25 |
| ＊192 | 93 | 16 － | 249 |  | $114$ | We 1 Mnr | 58 | 6 | Vals | 68 | 604 | 26 |
| 193 |  | 16 | 250 | Aebad | 115 | S 18 Feb | 69. | 7 | Jyesh | 69 | 505 | 27 |
| 194 |  | 18 － | 251 |  | 116 | Sa 9 Mar |  | 9 | A＜bad | 70 | 506 | 28 |
| 195 | 96 | 16 － | 252 |  | 117 | We 26 Feh |  | $)$ | Stav | \％1 | 307 | 29 |
| ＊196 | 97 | $15-$ | 253 | Jyesh |  | S 16 Feb | 2 |  | Brad | 72 | 508 | 30 |
| 197 | 98 | $16-$ | 254 |  | 11 | 56 Mal | 3 |  | Asta | 73 | 609 | 31 |
| 198 | 3299 | 16 | 255 | Aswa | 120 | Th 23 Feb | 4 | 12 | K边t | 74 | 510 | 32 |
| 199 | 3800 | 16 | 256 |  | 12 | We 14 Mar | 6 |  | Agra | 75 | 511 | 33 |
| ${ }^{2} 200$ | 3301 | 15 | 257 |  | 122 | Mo 1 Mar | 6 |  | Paunh | 76 | 512 | 84 |
| 201 | 3302 | 15 Mar | 258 | Sisp | 123 | Fr 20 Feb | 7 |  | MÉgh | 77 | 513 | 35 |
| 202 |  | $15-$ | 259 |  | 124 | Th 11 Mar | 8 | 15 | Phal | 78 | 514 | 56 |
| 203 |  | 16 － | 260 |  | 125 | Mo 28 Teb | 9 |  | Chait | 79 | 15 | 37 |
| ＊204 |  | $15-$ | 261 | Jyenh | 126 | Fr 17 Feb | 10 | 18 | Jais | 80 | 516 | 38 |
| 205 | 05 | $15-$ | 2 h 2 |  | 127 | Fr 6 Mar | 11 |  | Jyesh | 81 | 517 | 39 |
| 206 |  | $16-$ |  |  | 128 | Tu 25 Feb | 12 | 20 | Ashad | 82 | 518 | 40 |
| 207 |  | $15-$ | 264 | Chat | 120 | Sa 14 Feb | 9 |  | Srav | 83 | 519 | 41 |
| －208 |  | 15 － | 255 |  |  | Sa 5 Mar |  | 22 | Bhad | 84 | 520 | 42 |
| 209 |  | 16－ | 285 | Srêv | 131 | Tu 21 Feb |  | 23 | Abwa | 85 | 521 | 43 |
| 210 | 3311 | $16-$ | 267 |  | 132 | Mo 12 Mar | 316 | 6824 | Kârt | 86 | 522 | 44 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

## TABL ${ }^{2}$ XVII．－（Continued．）

General Tabls of Corresponding Dates

| A．D | Solar Yrar． |  | Lumi－Solat－YEat |  |  |  | Jupiter Cyclate |  |  | $\begin{aligned} & \text { 总 } \\ & \text { 蒠 } \\ & \text { 莮 } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Kalı } \\ & \text { Yaga } \end{aligned}$ | Intial Day | Vik Sam | Intercal Month | $1 \begin{aligned} & \mathrm{Sak} \\ & \mathrm{Sal} \end{aligned}$ | Initzal Day | 60 Years |  | ${ }_{\text {Yearn }}^{12}$ |  |  |  |
|  |  |  |  |  |  |  | 8 shd | Tal |  |  |  |  |
| 211 | 8812 | 16 Mar | 268 |  | 139 | Fr 1 Mar | 317 | 5625 | Agra | 87 | 523 | 45 |
| － 212 | 13 | $16-$ | 269 | Ashad | 134 | Tu 18 Feb | 18 | 26 | Paush | 88 | 524 | 48 |
| 213 | 14 | 16 － | 270 |  | 135 | Tu 9 Mar | 19 | 27 | Magh | 89 | 525 | 47 |
| 214 | 15 | 16 － | 271 |  | 188 | Ss 26 Feb | 20 | 28 | Phal | 90 | 526 | 48 |
| 210 | 16 | 16 － | 272 | Jyeah | 137 | Wo 15 Feb | 21 | 29 | Chat | 91 | 527 | 49 |
| － 216 | 17 | 16 － | 273 |  | 158 | We 6 Mar | 22 | ． 80 | Vais | 92 | 528 | 50 |
| 217 | 18 | 16 － | 274 | Anwt | 159 | 523 Feb | 23 | 81 | Jyeah | 93 | 529 | 81 |
| 218 | 19 | 16 － | 278 |  | 140 | Sa 14 Mar | 24 | 82 | Aebad | 94 | 530 | 52 |
| 219 | 20 | 16 － | 275 |  | 141 | We 3 Mar | 25 | 39 | 8rav | 85 | 531 | 53 |
| － 220 | 8321 | $16-$ | 277 | 8râv | 142 | S 20 Feb | 26 | 84 | Bhed | 96 | 532 | st |
| 221 | 3822 | 16 Mar | 278 |  | 149 | 811 Mar | 27 | 35 | Aswa | 97 | 533 | 85 |
| 222 | 29 | 16 － | 279 |  | 144 | Th 28 Feb | 28 | 86 | Kart | 98 | 534 | 56 |
| 223 | 24 | 16 － | 280 | Jjesh | 145 | Mo 17 Freb | 29 | 97， | Agrn | 99 | 535 | 67 |
| － 224 － | 25 | 16 － | 281 |  | 146 | Mo 8 Mar | 90 | 88 | Paush | 100 | 536 | 58 |
| 225 | 28 | $16-$ | 282 |  | 147 | Fr 25 Feb | 32 | 39 | －Phbl | 1 | 537 | 50 |
| 226 | 27 | 16 － | 289 | Chaut | 88 | Tu 14 Feb | 89 | 40 | Cbatt | 2 | 538 | 60 |
| 227 | 28 | 16 － | 284 |  | 148 | Mo 5 Mar | 84 | 41 | $\nabla_{\text {big }}$ | 8 | 530 | 61 |
| － 228 | 29 | 16 － | 285 | Briv | 150 | Th 21 Feb | 35 | 42 | Jjesh | 4 | 540 | 62 |
| 229 | 80 | 16 － | 286 | －• | 151 | Th 13 Mar | 86 | 48 | Ashad | 5 | 541 | 68 |
| 290 | 8881 | 16 － | 287 | ． | 152 | Mo 1 Mar | 87 | 44 | Srîy | 6 | 542 | 64 |
| 281 | 8892 | 16 Mar | 288 | Ashad | 153 | Fr 18 Feb | 88 | 45 | Bhad | 7 | 543 | 65 |
| － 282 | $88$ | 16 － | 289 |  | 154 | Fr 9 Mar | 89. | 46 | Anwa | 8 | 544 | 50 |
| 293 | 84 | 16 － | 290 |  | 155 | Tu 26 Feb | 10 | 47 | Kârt | 9 | 545 | 67 |
| 234 | 95 | $16-$ | 291 | Vals | 156 | Tu 15 Feb | 41 | 48） | Agra | 10 | 546 | 68 |
| 235 | 85 | 16 － | 292 |  | 157 | Mo 6 Mar | 42 | 40 | Paush | 11 | 547 | 65 |
| － 238 | 37 | 16－ | 203 | Bhad | 158 | Fr 23 Feb ． | 48 | 50 | Magh | 12 | 548 | 70 |
| 237 | 88 | $16-$ | 294 |  |  | Fr 14 Mar | 44 | 51 | Pbâl | 13 | 540 | 71 |
| 238 | 89 | $16-$ | 290 |  | 160 | Tu 3 Mar | 45 | 52 | Chait | 14 | 550 | 72 |
| 239 | 40 | 16 － | 296 | Bxty | 161 | We 20 Fob | 48 | 53 | Vaia | 16 | － | 79 |
| ＊240 | 8941 | 16 － | 297 |  | 162 | Wo 11 Kar | 347 | 68． 84 | Jyenh | 16 |  | 74 |

TABLE XVII.-(Continued.)
General Table of Correspondeng Dates

† Kartika onutied, and Imrika solerialacy.

TABLE XVII．－（Continued）
General Table of Correspondrng Dates

| A．D | golat－Ygar． |  | LUNI Solar－year |  |  |  | Jupiter－Cyoles |  |  |  | $\begin{aligned} & \text { 曹 } \\ & \text { 㤩 } \\ & \frac{D}{6} \end{aligned}$ | $\begin{array}{\|l} \text { 昆 } \\ \text { 若 } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Ynge } \end{gathered}$ | Initnal Day | Vik Sam | Intercal <br> Month | $\left\|\begin{array}{c} \text { Sak } \\ \text { Sal } \end{array}\right\|$ | Inutial Day | 60 Years |  | $\stackrel{12}{\text { Years }}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel． |  |  |  |  |
| 271 | 3372 | 17 Mar | 328 |  | 198 | 826 Feb | 418 | 6725 | Parsh | 47 | 22 |  |
| － 272 | 73 | $16-$ | 829 | Vals | 194 | Th 15 Feb | 19. | 25 | Magh | 48 | 23 | 10 |
| 273 | 74 | 17 － | 390 |  | 195 | Th 5 Mar | 20 | 27 | Phal | 49 | 24 | 10 |
| 274 | 75 | 17 － | 331 | Bhàd | 195 | Mo 23 Feb | 21 | 28 | Chalt | 50 | 25 | 10 |
| 275 |  | 17 － |  |  | 197 | Mo 14 Mar | 22 | 29 | Vass | 81 | 26 | 10 |
| － 275 | 77 | $15-$ | 338 |  | 198 | Fr 3 Mar | 23 | 30 | Jyesh | 52 | 27 | 11 |
| 277 | 78 | $17-$ | 334 | Brầ | 199 | Ta 20 Feb | 24 | 31 | Ashad | 53 | 28 | 11 |
| 278 | 79 | 17 － | 35 |  | 200 | Mo 11 Mar | 25 | 32 | Srâv | 54 | 29 | 1 |
| 270 | 80 | $17=$ | 6 |  | 201 | Fr 28 Feb | 26 | 33 | Bhad | 55 | 30 | 11 |
| － 280 | 3381 | $16-$ | 337 | Jyeah | 202 | Ta 17 Feh | 27 | 84 | Aswa | 56 | 31 | 11 |
| 281 | 3382 | 17 Mar | 338 |  | 208 | Tu 8 Mar | 28 | 35 | Kart | 57 | 32 |  |
| 282 | 83 | 17 － | 339 | $\dagger$ | 204 | Sa 25 Feb | 29 | 86 | Agra | 58 | 38 |  |
| 283 |  | 17 － | 340 | Chatt | 205 | We 14 Feb | 0 | 87 | Paush | 99 | 34 | 11 |
| － 284 | 85 | $16-$ | 341 |  | 206 | We 5 Mar | 31 | 88 | Magh | 60 | 35 |  |
| 285 | 86 | $17-$ | 2 | Srâv | 207 | Sa 21 F＇eh | 32 | 89 | Phal | 61 | 36 |  |
| 286 |  | 17 － | 343 |  | 208 | Fr 12 Mar | 33 | 40 | Chart | 62 | 37 | 2 |
| 287 | 88 | $17-$ |  |  | 209 | Ta 1 Mar | 34 | 41 | Fas | 53 | 38 | 2 |
| － 288 |  | $16-$ | 345 | Jyeah | 210 | St 18 Feh | 6 | 42 | Jyesh | 54 | 39 |  |
| 280 | 90 | $17-$ |  |  | 211 | 8． 9 Mar | 36 | 48 | ashad | 56 | 40 | 2 |
| 290 | 3991 | 17 － | 847 | ＂ | 212 | We 25 Feb | 87 | 44 | Brit | 67 | 41 | 12 |
| 291 | 8392 | 17 Mar | 348 | Vals | 218 | S 15 Feh | 88 | 45 | Bhed | 67 | 42 |  |
| －292 |  | $16-$ | 348 |  | 14 | 86 Mar | 38 | 46 | A＋wa | 68 | 43 |  |
| 203 |  | 17 － |  | Bhad | 15 | Th 23 Feb | 0 | 47 | Kirt | 69 | 44 |  |
| 294 |  | $17-$ | 351 |  | 16 | We 14 Mar | 41 | 48 | Agra | 70 | 45 |  |
| 295 |  | 17 － | 352 |  | 7 | 38 Mar | 42 | 49 | Paush | 71 | 46 |  |
| － 296 | 87 | $16-$ | 353 | Ashad | 218 | Th 20 Feh | 43 | 50 | Magh | 72 | 47 |  |
| 297 |  | $17-$ | 354 |  |  | Th 11 Mar | 44 | 51 | Phal | 73 | 48 |  |
| 298 | 99 | $17-$ | 355 |  | 20 | Mo 28 Feh | 5 | 52 | Ohait | 74 | 49 |  |
| 299 | 3400 | 17 － |  | Jyesh | 221 | Fr 17 Feh | 46 | 53 | Vais | 75 | 50 | 13 |
| － 300 | 3401 | 16 － |  |  | 222 | Fr 8 May | 447 | 5754 | Jyeeh | 76 | 51 | 3 |

Agribyas omittel and Aswine mervelary．

## TABLE XVII.-(Continued.)

General Table of Corresponding Dates

A D


TABLIE XVII.-(Continued.)
General Table of Corresponding Dates

| AD | Solaz-Teas. |  | LUSI-Solar-Yeiz |  |  |  | Jtpitin-Cicles. |  |  |  | $\begin{aligned} & \text { G } \\ & \infty \\ & \text { 茇 } \\ & \text { 8 } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initial Day | $\begin{array}{\|c} V_{1 k} \\ S_{s a m} \end{array}$ | Intercal Month | $\left\|\begin{array}{l} \text { Salk } \\ \mathrm{Bal} \end{array}\right\|$ | Initial Day | 60 Years |  | ${ }_{\text {Yeert }}^{12}$ |  |  |  |
|  |  |  |  |  |  |  | S sid | Tel |  |  |  |  |
| 331 | 8432 | 17 Mar | 388 | Bhed | 253 | Ta 23 Feb | 819 | 8825 | Magh | 7 | 82 | 168 |
| -332 | 33 | - | 389 |  | 254 | Tu 14 Mar | 20 | 26 | Phal | 8 | 83 | 166 |
| 883 | 84 | - | 890 |  | 256 | Sa 3 Mar | 22 | 27. | Chart | 9 | 84 | 167 |
| 334 | 35 | - | 391 | Abhad | 206 | We 20 Feb | 22 | 28 | Vais | 10 | 85 | 168 |
| 835 | 86 | - | 392 |  | 257 | Tu 11 Mar | 23 | 29 | Jyeah | 11 | 86 | 168 |
| *386 | 87 | - | 393 |  | 228 | St 28 Feb | 24 | 30 | Ashad | 12 | 87 | 170 |
| 337 | 88 | - | 394 | Jyerh | 259 | S 17 Feb | 25 | 81 | Brâv | 18 | 88 | 171 |
| 338 | 39 | - | 395 |  | 260 | We 8 Mar | 28 | 92 | Bhad | 14 | 89 | 172 |
| 838 | 40 | - | 396 | Asws | 261 | S 25 Fob | 27 | 33 | Aswa | 15 | 90 | 178 |
| * 340 | 3441 | - | 397 |  | 262 | g 16 Mar | 28 | 84 | Kart | 16 | 91 | 174 |
| 341 | 3442 | - | 398 |  | 263 | Th 5 Mar | 29 | 85 | Agra | 17 | 92 | 175 |
| 342 | 43 | - | 399 | Sriv | 264 | Th 21 Feb | 30 | 36 | Pansh | 18 | 93 | 176 |
| 343 | 44 | - | 400 |  | 265 | Se 12 Mar | 31 | 97 | Magh | 19 | 94 | 177 |
| -344 | 45 | - | 401 |  | 266 | Th 1 Mar | 32 | 88 | Phal | 20 | 96 | 178 |
| 345 | 46 | - | 402 | Jyenh | 267 | Mo 18 Feh | 33 | 39 | Chart | 21 | 80 | 179 |
| 340 | 47 | - | 403 |  | 208 | 59 Mar | 34 | 40 | Vars | 22 | 97 | 180 |
| 347 | 48 | - | 404 |  | 269 | Th 26 Feb | 85 | 41 | Jyesh | 23 | 98 | 181 |
| *318 | 49 | - | 408. | Chalt | 270 | Mo 15 Feb | 86 | 42 | Asbac | 24 | 99 | 182 |
| 349 | 50 | - | 406 |  | 271 | Mo 6 Mar | 87 | 43 | Srât | 25 | 100 | 183 |
| 850 | 8451 | - | 407 | Sràr | 272 | Fr 23 Feb |  |  | Bhad | 26 | 101 | 184 |
| 361 | 3452 | - | 408 |  | 273 | Ih 1t Mar | 38 | 45. | Asws | 27 | 102 | 185 |
| *3022 | 53 | - | 409 |  | $27 t$ | Tu 3 Mar | 40 | 46 | Kart | 28 | 103 | 86 |
| 353 | 54 | - | 410 | Ashad | 275 | Sa 20 Feb | 41 | 47 | Agra | 29 | 104 | 87 |
| 354 | 55 | - | 411 |  | 276 | Fr 11 Mar | 42 | 48 | Paush | 30 | 105 | 188 |
| 355 | 66 | - | 412 |  | 277 | Tu 28 Feb |  | 49 | Magh | 31 | 106 | 89 |
| *306 | 57 | - | 413 | Jjesh | 278 | Sa 17 Feb | 44 | 50 | Phâl | 32 | 107 | 190 |
| 357 | 58 | - | 414 |  | 278 | Sa 8 Mar |  | 51 | Chat | 33 | 108 | 191 |
| 358 | 59 | - | 413 | Asws | 280 | We 25 Feb | 45 | 52 | Vais | 34 | 109 | 192 |
| 359 | 60 | - | 416 |  | 281 | Ta 16 Mar |  | 53 | Jyenh | 35 | 110 | 188 |
| *360 | 3461 | - | 417 |  | 282 | S 5 Mar | 548 | 6854 | Ashad | 86 | 111 | 194 |

TABL XI XYII.-(Continued.)
General Table of Correspondng Dates

| A.D | Solab-Year |  | Luni-Solar-Year |  |  |  | Jepiter-Cyelies |  |  |  | $\begin{aligned} & \text { 哥 } \\ & \text { z} \\ & \text { 范 } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \mathrm{K}_{\mathrm{al}}^{2} \\ & \text { Yuga } \end{aligned}$ | Initial Dey | $\left\lvert\, \begin{aligned} & \nabla_{1 \mathbf{k}} \\ & \text { Sam } \end{aligned}\right.$ | Intercal Month | $\begin{aligned} & \mathbf{S}_{s k} \\ & \mathbf{S}_{\mathrm{al}} \end{aligned}$ | Initial Day | 60 Years |  | $\frac{12}{\text { Yeart }}$ |  |  |  |
|  |  |  |  |  |  |  | 3 Sid | Tel |  |  |  |  |
| 361 | 3462 | 17 Mar | 418 | Ashad | 283 | We 21 Feb | 649 | 8855 | Srâ | 37 | 112 | 195 |
| 362 | 63 | - | 419 |  | 284 | Ta 12 Mar | 50 | 56 | Bhâd | 88 | 113 | 186 |
| 363 | 64 | - | 420 |  | 285 | Sa 1 Mar | 51 | 57. | Abwa | 39 | 114 | 197 |
| ${ }^{*} 964$ | 6 ¢ | - | 421 | Jyeah | 286 | We 13 Mar | 62 | 58 | Kart | 40 | 115 | 198 |
| 365 | 66 | - | 422 |  | 287 | We 9 Mar | 63 | 59 | Agra | 41 | 116 | 199 |
| 366 | 67 | - | 423 | Phal | 286 | S 26 Feb | 54 | 60 | Paush | 42 | 117 | 120 |
| 367 | 68 | - | 424 |  | 289 | Ss 17 Mar | 55 | 591 | Mâgh | 43 | 118 | 201 |
| - 366 | 69 | - | 425 | Sriv | 290 | Wo 6 Mnr | 56 | 2 | Phal | 44 | 119 | 202 |
| 369 | 70. | - | 426 |  | 291 | Mo 23 Feb | 57 | 8 | Chat | 45 | 120 | 203 |
| 870 | 8471 |  | 427 |  | 292 | S 14 Mar | 56 | , | Vala | 46 | 121 | 204 |
| 371 | 8472 | - | 428 |  | 299 | Th 8 Mar | 59 | 8 | Jyesh | 47 | 122 | 205 |
| ${ }^{*} 872$ | 78 | - | 429 | Ashad | 294 | Mo 20 Feb | 60 | 6 | Ashad | 48 | 128 | 206 |
| 973 | 74 | - | 430 |  | 295 | Mo 11 Mar | 61 | 7 | Srit | 49 | 124 | 207 |
| 374 | 75 | - | 431 |  |  | Fr 23 Feh | 2 | 8 | Bhad | 50 | 125 | 2088 |
| 975 | 76 | - | 432 | Vais | 297 | Tu 17 Feb | 3 | 9 | Abwa | 51 | 126 | 200 |
| * 876 | 77 | - | 433 |  | 298 | Ta 8 Mar | 4 | 10 | Kırt | 52 | 127 | 210 |
| 877 | 78 | - | 434 | Bhad | 298 | Sa 26 Feb | 5 | 11 | Agra | 53 | 128 | 211 |
| 378 | 79. | - | 435 |  | 300 | Fr 16 Mar | 6 | 12 | Paush | 54 | 129 | 212 |
| 879 | 80 | $\sim$ | 4\% |  | 301 | Tu 5 Mar | 7 | 18 | Magh | 55 | 130 | 218 |
| * 380 | 3481 |  | 437. | Ashed | 802 | Fr 2\& Feb | 8 | 14 | Phal | 66 | 181 |  |
| 981 | 5482 | - | 488 |  | 308 | Fr 12 Mrr | 9 | 15 | Chant | 57 | 132. | 216 |
| 382 | 88 | - | 439 |  | $304{ }^{1}$ | Tu 1 Mar | 10 | 16 | Veas | 56 | 183 | 316 |
| 383 | 84 | - | 440 | Jyesh | 305 | Sa 18 Feh | 11 | 17 | Jyesh | 59 | 184 | 217 |
| -384 | 35 | - | 441 |  | 306 | Sa 9 Mar | 12 | 18 | Ashad | 60 | 195 | 218 |
| 865 | 86 | - | 442 | Phal | 307 | We 26 Feb | 18 | 19 | Srà | 61 | 136 | 210 |
| 386 | 87 | - | 443 |  | 308 | Tu 17 Mar | 14 | 20 | Bhâd | 62 | 137 | 220 |
| 887 | 86 | - | 444 |  | 309 | Ss 6 Mar | 15 | 21 | Aswa | 63 | 188 | 221 |
| ${ }^{+888}$ | 39 | - | 445 | Sriv | 310 | We 23 Feb | 16 | 22 | Kart | 64 | 139 | 222 |
| 880 | 90 | - | 446 | .. 8 | 811 | We 14 Mar |  | 28 | Agrs | 65 | 140 | 228 |
| 890 | 3491 | - | 447 | - 8 | 312 | S 3 Mar | 618 | 5024 | Pauah | 66 | 141 | 224 |

## TABLE XVII．－（Continued．）

General Table of Correoponding Dates

| A D | Solar－Ybar． |  | Luni Solar－Yrat． |  |  |  | Jupiter－CxCles |  |  | $\begin{aligned} & \text { 寻 } \\ & \text { 舀 } \\ & \text { 总 } \\ & \text {. } \end{aligned}$ |  | $\begin{aligned} & \text { 联 } \\ & \text { 信 } \\ & \text { 吕 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga. } \end{gathered}$ | Initial Day |  |  | Sak <br> Sal | Inital Day | 60 Years |  | $\stackrel{12}{\text { Year: }}$ |  |  |  |
|  |  |  |  |  |  |  | S Sld | Tel |  |  |  |  |
| 391 | 3492 | 17 Mar | 448 | Ashad | 319 | Th 20 Feb | 619 | 5925 | Magh | 67 | 142 | 225 |
| ＊392 | 93 | － | 449 |  | 314 | Th 11 Mar | 20 | 26 | Phâl | 68 | 143 | 226 |
| 393 | 94 | － | 450 |  | 315 | Mo 28 Feb | 21 | 27 | Chart | 69 | 144 | 227 |
| 394 | 95 | － | 451 | Vals | 316 | Fr 17 Feb | 22 | 28 | Vans | 70 | 145 | 228 |
| 395 | 96 | － | 452 |  | 317 | Th 8 Mar | －24 | 29 | －Ashed | 71 | 146 | 229 |
| ＊396 | 97 | － | 453 | Bhad | 318 | Mo 25 Feb | 25 | 30 | Srâ | 72 | 147 | 230 |
| 397 | 98 | － | 454 |  | 319 | Mo 16 Mar | 26 | 31 | Bhad | 79 | 148 | 231 |
| 998 | 89 | － | 455 |  | 320 | Fr 5 Mar | 27 | 32 | Aswa | 74 | 149 | 232 |
| 399 | 9500 | $\cdots$ | 456 | Ashed | 321 | Mo 21 Feb | 28 | 33 | Kârt | 75 | 150 | 23. |
| ＊ 400 | 3501 | 17 | 457 |  | 322 | Mo 12 Mar | 29 | 84 | Agra | 76 | 151 | 234 |
| 401 | 3502 | $18-$ | 458 |  | 323 | Fr 1 Mar | 30 | 35 | Paush | 77 | 162 | 238 |
| 402 | 03 | 18 － | 459 | Jyesh | 324 | Tu 18 Feb | 31 | 36 | Magh | 78 | 153 | 36 |
| 403 | 04 | 18 | 460 |  | 325 | Mo 9 Mar | 32 | 37 | Phàl | 79 | 154 | 237 |
| －404 | 05 | 17 － | 461 | $\dagger$ | 326 | Fr 26 Feb | 33 | 98 | Chatt | 80 | 155 | 298 |
| 405 | 06 | $18-$ | 462 | Chast | 327. | We 15 Feb | 34 | 90 | Valn | 81 | 156 | 239 |
| 406 | 07 | $18-$ | 463 |  | 328 | Tr 6 Mar | 35 | 40 | Jyesh | 82 | 157 | 240 |
| 407 | 08 | $18-$ | 464 | Srât | 329 | Sa 23 Feb | 86 | 41 | Ashad | 88 | 158 | 241 |
| ＊ 408 | 09 | 17 － | 465 |  | 330 | Sa 14 Mar | 37 | 42 | Srâv | 84 | 159 | 42 |
| 409 | 10 | $18-$ | 466 |  | 331 | We 3 Mar | 38 | 43 | Bhad | 85 | 160 | 248 |
| 410 | 3511 | $18-$ | 467 | Ashad | 332 | $\mathrm{S} \quad 20 \mathrm{Feb}$ | 39 | 44 | Aswa | 8 C | 161 | 244 |
| 411 | 3512 | 18 | 468 |  | 337 | Sa 11 Mar | 40 | 45 | Kirt | 87 | 162 | 248 |
| ＊412 | 13 | 17 － | 469 |  | 334 | We 28 Feb | 41 | 46 | Agra | 88 | 163 | 246 |
| 413 | 14 | 18 － | 470 | Vals | 335 | Mo 17 Feb | 42 | 47 | Paush | 89 | 164 | 247 |
| 414 | 15 | 18 － | 471 |  | 336 | 58 Mar | 43 | 48 | Magh | 90 | 165 | 248 |
| 415 | 16 | 18 － | 472 | Bhâd | 337 | Th 25 Feb | 44 | 49 | Phal | 91 | 166 | 248 |
| －116 | 17 | 18 | 473 |  | 338 | Th 16 Mar | 45 | 50 | Chait | 92 | 167 | 250 |
| 417 | 18 | 18 － | 474 |  | 339 | Mo 5 Mar | 46 | 51 | Vais | 93 | 188 | 251 |
| 418 | 19 | 18 － | 475 | Ashad | 340 | S 21 Feb | 47 | 82 | Jyeah | 94 | 169 | 252 |
| 419 | 20 | $18-$ | 476 |  | 341 | We 12 Mar | 48 | 83 | Anhed | 95 | 170 | 258 |
| ＊ 420 | 3521 | 18 － | 477 |  | 842 | Mo 1 Mar | 648 | 69．64 | Srêv | 98 | 171 | 254 |

t KAruke retreuched asd Eirita inseromiary．

TABLE XVII.-(Continued,)
General Table of Corresponding Dates

| A D | Solat Year. |  | Luni-Solab-Yeab |  |  |  | Juptter-Cyolers. |  |  |  |  | 品 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yaga } \end{gathered}$ | Initial Day | VıkSam | Intercal Month | $\left\|\begin{array}{l} S_{a k} \\ \mathrm{Sal} \end{array}\right\|$ | Intual Day | 60 Years |  | 12 Years |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 421 | 8522 |  | 478 | Jyeek | 343 | Fr 18 Feb | 850 | 5955 | Bhêd | 97 | 172 | 255 |
| 422 | 23 |  | 479 |  | 344 | Th 9 Mar | 51 | 56 | Arwa | 98 | 173 | 250 |
| 423 | 24 |  | 480 | $\dagger$ | 34. | Mo 26 Feb | 52 |  | Kûrt | 99 | 174 | 257 |
| * 424 | 25 |  | 481 | Chnit | 46 | Fr 15 Fib | 53 | 58 | Agra | 100 | 175 | 255 |
| 42 K | 26 |  | 482 |  | 347 | Fre 6 Mar | 54 |  | Paush | 1 | 176 | 259 |
| 426 | 27 |  | 483 | Srav | 348 | Tu 23 Feb | 65 | 60 | Magh | 2 | 177 | 260 |
| 427 | 28 |  | 484 |  | 340 | Mo 14 Mas | 56 | 601 | Phal | 3 | 178 | 261 |
| * 428 | 29 |  | 480 |  | 350 | Sa 3 Mar | 67 |  | Chait | 4 | 178 | 262 |
| 429 | 30 |  | 486 | Jyesh | 351 | We 20 Feb | 58 |  | Vaia | b | 180 | 263 |
| 430 | 3531 |  | 487 |  | 552 | Tu 11 Mar | 59 | 4 | Jyeah | 6 | 181 | 264 |
| 431 | 9532 |  | 488 |  | 353 | Sa 28 Feb | 60 | 5 | Ashad | 7 | 182 | 265 |
| * 432 | 33 |  | 489 | Va1s | 354 | We 17 Feb | 71 | 6 | Srav | 8 | 183 | 260 |
| 433 | 34 |  | 490 |  | 956 | We 8 DIar | 2 | 7 | Bhâu | 9 | 184 | 267 |
| 434 | 35 |  | 49. | Bhêd | 936 | S 25 Fcb | 3 | 8 | Aswa | 10 | 185 | 2688 |
| 435 | 36 |  | 492 |  | 337 | $\mathrm{Sa}_{\mathrm{a}} 16 \mathrm{Mar}$ | 4 |  | Kârt | 11 | 186 | 269 |
| * 436 | 37 |  | 493 |  | 358 | Th 5 Mar | 5 | 10 | Agra | 12 | 187 | 270 |
| 437 | 38 |  | 494 | Ashad | 359 | S 21 Feb | 6 | 11 | Paush | 13 | 188 | 271 |
| 438 | 39 |  | 495 |  | 360 | Sa 12 Mar | 7 | 12 | Màgh | 14 | 190 | 272 |
| 439 | 40 |  | 496 |  | 361 | We 1 Met | 8 | 13 | Phall | 15 | 190 | 273 |
| * 40 | 3541 |  | 497 | Jyesh | 362 | S 19 Feb |  | 14 | Charit | 16 | 191 | 274 |
| 441 | 3542 |  | 498 | - | 363 | S 9 Mar | 10 | 15 | Vals | 17 | 182 | 278 |
| 442 | 43 |  | 498 | Bhed | 364 | Th 26 Feb | 11 | 16 | Jyesh | 18 | 193 | 276 |
| 443 | 44 |  | 500 |  | 365 | We 17 Mar | 12 | 17 | Ashad | 19 | 194 | 277 |
| *44t | 45 |  | 501 |  | 366 | Mo 6 Mrr | 13 | 18 | Srâv | 20 | 195 | 278 |
| 445 | 46 |  | 502 | Brav |  | Fri 23 Feb | 14 | 18 | Bhad | 21 | 196 | 279 |
| 446 | 47 |  | 503 |  | 368 | Th 14 Mar | 15 | 20 | Aswa | 22 | 197 | 280 |
| 447 | 48 |  | 504 |  |  | Mo 3 Mar | 16 | 21 | Kart | 23 | 188 | 281 |
| *48 | 49 |  | 005 | Jyeah |  | Fr 20 Feb |  | 22 | Agrs | 24 |  | 282 |
| 449 | 60 |  | 506 | : |  | Fr 11 Mar |  |  | Pansh | 25 |  | 283 |
| 450 | 3551 |  | 507 |  | 372 | Tu 28 Feb | 719 | 6024 | Magh | 26 | 201 | 284 |
|  |  |  |  | 'he |  |  |  |  |  |  |  |  |

## TABLE XVII.-(Continued)

General Table of Corresponding Dates.

| A D | Solar-Yeat |  | Lumi-Solar-Yeat |  |  |  | JUpitea-Cycles. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \mathrm{Kal}_{1} \\ \mathbf{Y} \mathrm{mag}^{2} \end{gathered}$ | Intinal Day | $\left\lvert\, \begin{gathered} \text { Fik } \\ \text { Samm } \end{gathered}\right.$ | Intercal Month | $\left\|\begin{array}{c} \text { Sak } \\ \text { Sal } \end{array}\right\|$ | Imital Day | 60 Yeara |  | $\begin{gathered} 12 \\ \text { Years } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | 3 Sld | Tel |  |  |  |  |
| 451 | 3552 |  | 508 | Va1a | 379 | Sa 17 Feb | 720 | 6025 | Phal | 27 | 232 | 285 |
| ${ }_{*}{ }^{452}$ | 53 |  | 509 |  | 374 | Sa 8 Mar | 21 | 26 | Chart | 23 | 203 | 286 |
| 453 | 54 |  | 510 | Bhad | 375 | We 25 Feb | 22 | 27 | Vals | 29 | 204 | 287 |
| 453 | 55 |  | 511 |  | 376 | Tu 16 Mar | 23 | 28 | Jyesh | 30 | 205 | 288 |
| 455 | 56 |  | 512 |  | 377 | Sa 5 Mar | 24 | 29 | Ashad | 31 | 205 | 288 |
| *466 | 57 |  | 513 | Ashad | 378 | Ta 21 Feb | 25 | 30 | Srày | 32 | 207 | 290 |
| 457 | 58 |  | 514 |  | 379 | Tu 12 Mar | 26 | 31 | Bhad | 33 | 208 | 291 |
| 488 | 59 |  | 516 |  | 380 | Sa 1 Mar | 27. | 32 | Aswa | 34 | 209 | 292 |
| 459 | 60 |  | 516 | Jyesh | 381 | We 18 Feb | 28 | 39 | Kart | 35 | 210 | 293 |
| * 460 | 3861 |  | 517 |  | 382 | We 9 Mar | 29 | 34 | Agra | 36 | 211 | 294 |
| 461 | 8562 |  | 518 | Bhad | 383 | E 28 Feb | 30 | 35 | Paush | 37 | 212 | 295 |
| 462 | 63 |  | 519 |  | 384 | Fr 16 Mar | 83 | 36 | Magh | 38 | 213 | 296 |
| 463 | 64 |  | 620 |  | 385 | We 6 Mar | 32 | 87 | Phal | 34 | 214 | 297 |
| *464 | 65 |  | 521 | Srat | 386 | S 23 Feb | 93 | 38 | Chait | 40 | 215 | 298 |
| 465 | 86 |  | 522 |  | 387 | S 14 Mar | 34 | 89 | Vais | 41 | 216 | 299 |
| 466 | 67 |  | 523 |  | 388 | Th \$ Mar | 35 | 40 | Jyesh | 42 | 217 | 200 |
| 467 | 68 |  | 524 | Jyeoh | 339 | Mo 20 Feb | 36 | 41 | Ashad | 43 | 215 | 301 |
| -468 | 69 |  | 525 |  | 390 | Moll Mar | 87 | 42 | Srár | 44 | 219 | 302 |
| 469 | 70 |  | 526 | $\dagger$ | 391 | Fr 28 Feb | 38 | 43 | Bhâd | 45 | 220 | 303 |
| 470 | 3571 |  | 527 | Vaus | 392 | Tu 17 Feb | 38 | 44 | Aswa | 46 | 221 | 304 |
| 471 | 3572 |  | 528 |  | 393 | Th 8 Mar | 40 | 45 | Kart | 47 | 222 | 305 |
| *472 | 73 |  | 529 | Bhed | 394 | Fz 25 Feb | 41 | 46 | Agra | 48 | 223 | 306 |
| 478 | 74 |  | 530 |  | 895 | Fr 16 Mar | 42 | 47 | Paush | 48 | 224 | 307 |
| 474 | 75 |  | 581 |  | 896 | Ta 6 Mar | 43 | 48 | Magh | 50 | 225 | $30 \%$ |
| 475 | 76 |  | 532 | Ashad | 397 | Fr 21 Feb | 44 | 49 | Phal | 51 | 226 | 309 |
| ${ }^{*} 476$ | 77 |  | 533 |  | 398 | Fr 12 Mar | 45 | 50 | Chait | 52 | 227 | 310 |
| 477 | 78 |  | 634 |  | 399 | Tu 1 Mar | 46 | 51 | Vais | 53 | 228 | 311 |
| 478 | 79 |  | 535 | Jyesh | 400 | Sa 18 Feb | 47 | 52 | Jyesh | 54 | 229 | 312 |
| 479 | 80 |  | 536 |  | 401 | Fr 9 Mar | 748 | 53 | Aahad | 55 | 230 | 318 |
| * 480 | 3581 |  | 537 | A8wa | 402 | Tr 28 Feb | - 50 | 6054 | - bhad | 56 | 231 | 314 |

$\dagger$ Khruke owittod, and Earuka ivterealary

TABLIE XVII－（Continqed）
General Table of Corresponding Dates．

| A．D． | Solab－Year |  | Lunt－Solar－Yeat． |  |  |  | JUpiter－Oyclirs |  |  |  | $\begin{aligned} & \text { 貝 } \\ & \text { 䔱 } \\ & \text { 㤟 } \end{aligned}$ | 宫 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initıal Day | $\left\|\begin{array}{c} V_{i k} \\ S_{\mathrm{sim}} \end{array}\right\|$ | Interoal Month | $\left\|\begin{array}{l} \text { Bak } \\ B_{\text {al }} \end{array}\right\|$ | Intial Day | 60 Years． |  | $\begin{aligned} & 12 \\ & \text { Yeari. } \end{aligned}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 481 | 3582 |  | 5381 | － | 403 | Tu 17 Mar | 781 | 6055 | Anwa | 57 | 232 | 815 |
| 432 | 83 |  | 5391 |  | 404 | Ss 6 Mar | 82 | ＊ 6 | Klrt | 58 | 258 | 816 |
| 488 | 34 |  | 540 | Srtv | 405 | We 23 Feb | 53 | 57 | Agra | 58 | 234 | 317 |
| ＊ 484 | 88 |  | 641 |  | 406 | We 14 Mar | 64 | 58 | Panah | 60 | 235 | 318 |
| 485 | 85 |  | 542 |  | 407 | 3 Mar | 55 | 59 | Magh | 61 | 236 | 818 |
| 486 | 87 |  | 543 | Jyesh | 408 | Th 20 Feb | 86 | 60 | Phal | 62 | 23： | 320 |
| 487 | 88 |  | 544 | ．． | 409 | We 11 Mar | 67 | 611 | Chast | 63 | 238 | 821 |
| ＋488 | 88 |  | 545 | $\dagger$ | 410 | Mo 28 Fbb | 68 | 2 | Vara | 64 | 238 | 822 |
| 489 | 90 |  | 546 | Chast | 411 | Fr 17 Feb | 69 | 3 | Jyeah | 65 | $2 \pm 0$ | 823 |
| 400 | 3591 |  | 847 |  | 412 | Th 8 Mar | 60 | 4 | Ashad | 66 | 241 | 324 |
| 401 | 3502 |  | 548 | Bhed | 418 | Ko 25 Feb | 81 | 5 | Srav | 67 | 242 | 325 |
| ${ }^{4} 492$ | 93 |  | 549 |  | 414 | Mo 16 Mar | 2 | 6. | Bhâd | 68 | 243 | 826 |
| 493 | 94 |  | 850 |  | 415 | Fr 5 Mar | 8 | 7. | Aswa | 69 | 244 | 327 |
| 494 | 95 |  | 651 | Ashad | 416 | Mo 21 Feb | 4 | 8 | Kart | 70 | 245 | 328 |
| 496 | 96 |  | 552 |  | 417 | 8 12 Mar | 5 | 9 | Agre | 71 | 246 | 529 |
| ＊ 496 | 97 |  | S53 |  | 418 | Fr 1 Mar | 6 | 10 | Pranh | 72 | 247 | 880 |
| 497 | 98 |  | 554 | Jyeah | 418 | Ta 18 Feb | 7 | 11 | MAgh | 73 | 248 | 381 |
| 498 | 90 |  | 558 |  | 420 | Mo Mar | 8 | 12 | Phal | 74 | 248 | 392 |
| 409 | 3600 |  | 556 | A\％wa | 421 | Fr 26 Feb | 8 | 18 | Chat | 75 | 250 | 388 |
| － 500 | 8601 |  | 657 |  | 422 | Fr 17 Mer | 10. | 14 | Vals | 76 | 261 | 384 |
| 801 | 3602 |  | 558 |  | 428 | Tu 6 Mar | 11 | 15 | Jjosh | 77 | 252 | 838 |
| 802 | 03 |  | 559 | Ashed | 424 | Ba 23 Feb | 12 | 10 | Ashed | 78 | 253 | 886 |
| 808 | 04 |  | 560 |  | 425 | Fr 14 Mar | 13 | 17 | Srav | 78 | 254 | 837 |
| － 804 | 05 |  | 561 |  | 426 | We 3 Mar | 74 | 18 | Bhid | 80 | 255 | 388 |
| 805 | 08 |  | 562 | Jyenh | 427 | G 20 Feb | 15 | 19 | Aswa | 81 | 256 | 389 |
| 508 | 07 |  | 563 |  | 428 | Sa 11 Mer | 16 | 20 | Kart | 82 | 457 | 340 |
| 807 | $\pm 08$ |  | 564 | Phal | 428 | We 28 Feb | 17 | 21 | Agra | 83 | 258 | 341 |
| ${ }^{+608}$ | 08 |  | 565 |  | 430 | We 19 Mer | 18 | 22 | Parah | 84 | 258 | 342 |
| 509 | 10 |  | 866 | ． | 481 | 58 Mar | 19 | 23 | Magh | 85 | 260 | 348 |
| 510 | 8611 |  | 567 | Sray | 432 | Th 25 Feb | 820 | 81.24 | Phal | 36 | 261 | 844 |

\＄Pasikn omitred，and Kiatike intarcalary．

GRNERAL TABLE OF COREESPONDING DATES，
TABLIE XVII．－（Continued．）
General Table of Corresponding Dates

| A D | Solar－Year |  | Luni－Solam－Yeab |  |  |  | Jupitite－Cycles， |  |  | $\begin{aligned} & \text { 気 } \\ & \text { 品 } \\ & \text { 苟 } \\ & \text { 荗 } \end{aligned}$ | $\begin{aligned} & \text { 息 } \\ & \frac{1}{t} \\ & \frac{5}{3} \end{aligned}$ | 感 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Kall } \\ & \text { Yuga } \end{aligned}$ | Initial Day | Vik Sam | Intercal Month | $\left\lvert\, \begin{aligned} & \mathrm{Sak} \\ & \mathrm{Sal} \\ & \hline \end{aligned}\right.$ | Initisal Day | 60 Yeals |  | $\underset{\text { Yearb }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | ＊Sid | Tel |  |  |  |  |
| 511 | 3612 |  | 568 |  | 433 | We 16 Mar | 821 | 6125 | Chalt | 87 | 262 | 81 |
| ＊512 | 13 |  | 569 |  | 434 | Mo 5 Mar | 22 | 26 | Vals | 88 | 269 | 846 |
| 518 | 14 |  | 570 | Ashbd | 435 | Th 21 Feb | 23 | 27 | Jyesh | 89 | 264 | 347 |
| 814 | 15 |  | 571 |  | 436. | We 12 Mar | 24 | 28 | Ashad | 90 | 265 | 348 |
| 515 | 16 |  | 5721 |  | 437 | S 1 Mar | 25 | 29 | Srâv | 91 | 266 | 349 |
| ＊ 816 | 17 |  | 573 | Va18 | 438 | Th 18 Feb | 26 | 30 | Bhäd | 92 | 267 | 880 |
| 517 | 18 |  | 574 |  | 439 | Th 9 Mar | 27 | 31 | Abwa | 93 | 268 | 351 |
| 618 | 19 |  | 675 | Bluad | 440 | Mo 28 Feb | 28 | 32 | KGrt | 94 | 269 | 352 |
| 519 | 20 |  | 576 |  | 441 | S 17 Mar | 29 | 33 | Agra | 95 | 270 | 358 |
| ＊ 220 | 8621 |  | 677 |  | 442 | Fr 6 Mar | 30 | 34 | Pauah | 96 | 271 | 354 |
| 621 | 3622 |  | 578 | Ashad | 449 | Tu 29 Fel | 31 | 35 | Magh | 97 | 272 | 355 |
| 522 | 23 |  | 579 |  | 444 | Th 14 Mar | 32 | 36 | Phal | 98 | 273 | 356 |
| 623 | 24 |  | 580 |  | 445 | Fr 3 Mar | 33 | 37 | Chast | 99 | 274 | 867 |
| ＊524 | 25 |  | 581 | Jyeah | 446 | Tu 20 Feb | 34 | 38 | Vass | 100 | 275 | 358 |
| 625 | 26 |  | 582 |  | 447 | Tu 11 Mar | 85 | 39 | Jyesh | 1 | 275 | 369 |
| 526 | $\dagger 27$ |  | 583 | Phal | 448 | Sa 28 Feb | 36 | 40 | Ashad |  |  | 380 |
| 527 | 28 |  | 584 |  | 449 | Fr 19 Mar | 37 | 41 | Srâv |  | 278 | 361 |
| ＊528 | 29 |  | 585 |  | 450 | We 8 Mar | 38 | 42 | Bhid |  | 279 | 362 |
| 529 | 30 |  | 586 | Srav | 451 | S 28 Feb | 39 | 43 | Aswa |  | 280 | 363 |
| 530 | 3631 |  | 587 |  | 452 | Sa 16 Mar | 40 |  | Kêrt |  |  | 364 |
| 581 | 3632 |  | 588 |  | 453 | We 5 Mar | 41 | 45 | Agra | 7 |  | 365 |
| ${ }^{\circ} 532$ | 33 |  | 589 | Ashad | 454 | Sa 21 Feb | 42 | 45 | Paush | 8 |  | 855 |
| 533 | 34 |  | 590 | － | 455 | Sa 12 Mar | 43 | 47 | Magh | 9 |  | $\mathbf{8 6 7}$ |
| 534 | 35 |  | 591. |  | 406 | We 1 Mar | 4 | 48 | Phal | 10 |  | 368 |
| 535 | 36 |  | 692 | Vass | 457 | S 18 Feb | 45 | 49 | Chat | 11 |  | 369 |
| ＊${ }^{\text {¢ }} 36$ | 37 |  | 593！ |  | 458 | S 9 Mar | 46 | 50 | Vn1s | 12 |  | 370 |
| 597 | 98 |  | 594 | Bhad | 459 | Th 26 Feb | 47 | 51 | Jyesh | 13 |  | 371 |
| 538 | $39^{1}$ |  | 595 |  | 460 | We 17 Mrs | 48 | 52 | Aehad | 14 |  | 372 |
| 639 | 40 |  | 596 |  | 461 | 56 Mar | 49 |  | Sráv | 15. |  | 878 |
| ${ }^{5} 50$ | 3641 |  | 597 | Ashad | 462 | Th 23 Frb | 850 | 8154 | Bhad | 16 | 291 | 874 |

† Agraliayana omilted，and Kartika antercalary

TABLE XVII－（Continued．）
Gener al Table of Corresponding Dates．

| A D | Solar Year |  | Lumi－Solar Year |  |  |  | Jupiter－Cycles |  |  | $\begin{aligned} & \text { 㤟 } \\ & \text { 令 } \\ & \text { 茄 } \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { E } \\ & \text { W } \\ & \text { 品 } \\ & \mathbf{D} \end{aligned}$ | $\begin{aligned} & \text { a } \\ & \text { a } \\ & \text { E. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Initial } \\ & \text { Day }^{\text {In }} \end{aligned}$ | $\left\|\begin{array}{l} \text { Vik } \\ \text { Sarm } \end{array}\right\|$ | Intercal Mouth | $\begin{aligned} & \text { Salk } \\ & \text { Sal } \end{aligned}$ | Initarl Dey | 60 Years |  | $\underset{\text { Years }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel． |  |  |  |  |
| 541 | 8642 | 19 Mar | 598 |  |  | Th 14 Mar | 851 | 8156 | Aswa | 17 | 292 | 375 |
| 542 | 43 | 19 － | 599 |  | 464 | Mo a Mar | ［2） | 5 Cl | Kurt | 18 | 293 | 376 |
| 543 | 44 | $19-$ | 600 | Jyeah | 465 | Fr 20 Feb | 53. | 571 | Agra | 19 | 294 | s－7 |
| ＊544 | 45. | 19 － | 601 |  | 466 | Fr 11 Mar | 64 | 58 | Paush | 20 | 295 | 378 |
| 545 | ＋46 | 19 － | 602 | Phal | 46.7 | We 1 Mar | 50 | 59. | Magh | 21 | 296 | 379 |
| 546 | 47 | $19-$ | 603 |  |  | Mo 19 Mar | 66 | 60 | Pbul | 22 | 297 | 380 |
| 547 | 48 | 19 － | 604 |  |  | Fr 8 Mar | 57 | 821 | Chait | 23 | 298 | 381 |
| ＊ 648 | 49 | 19 | 605 | Stay |  | We 2f Feb | 58 | 2 | Vals | 24 | 294 | 38.2 |
| 549 | 50 | 19 － | 606 |  | 471 | Tu 16 Mar | 50 | 3. | Jychh | 25 | 300 | 383， |
| 550 | 3651 | 19 － | 607 |  | 47 ） | Sa 0 Mar | co | 4 | Asluad | 26 | 301 | 384 |
| 561 | 3652 | 10 Mar | 608 | Ashad | 47＇3 | We 22 Feb | 81 | 5 | Srav | 27 | 302 | 386 |
| ＊682 | 53 | 19 － | 609 |  | 4.4 | We ls Mar | 2 | 6 | Bhâd | 28 | 303 | 386 |
| 603 | 54 | 19 － | 610 |  | 175 | S 2 Mar | 3 | 7 | Aswa | 29 | 304 | 387 |
| 554 | 55 | 19 － | 611 | Vass |  | Th 19 Fcb | 4 | 8 | Kurt | 30 | 308 | 388 |
| 855 | 56 | 19 － | 612 |  |  | Tu 9 Mar | 5 | 9 | Agra | 31 | 306 | 389 |
| ＊ 5 56 |  | 19 － | 613 | Bhad | 478 | S 27 Feb | 6 | 10 | Paush | 32 | 307 | 390 |
| 557 | 58 | 19 － | 614 |  | 479 | Sa 17 Mar | 7 | 11 | Mugh | 33 | 308 | 391 |
| 568 | 59 | 19 | 618 |  |  | Th 7 Mar | 8 | 12 | Phal | 34 | 309 | 392 |
| 859 | 60 | 19 － | 616 | Ashad | 481 | Mo 24 Feb | 9 | 13 | Chat | 35 | 310 | 393 |
| ${ }^{\text {－580 }}$ | 3661 | 19 － | 617 |  | 482 | S 14 Mar | 10 | 14. | Vais | 36 | 311 | 334 |
| 661 | 3062 | 19 Mar | 618 |  | 487 | Th 3 Mar | 11 | 15 | Jyeerh | 37 | 812 | 398 |
| 562 |  | 19 － | 619 | Jyesh | 484 | Fr 21 Feb | 12 | 16 | Ashad | 38 | 313 | 396 |
| 563 | 61 | $19-$ | 620 |  | 485 | S 11 Mar | 13 | 17 | Srât | 99 | 314 | 397 |
| ＊ 684 | $\ddagger 65$ | 19－ | 621 | Aswa | 486 | Fr 29 Feb | 14 | 18 | Bhad | 40 | 315 | 398 |
| 565 | 66 | $10-$ | 622 |  | 487 | Th 19 Mar | －16 | 19 | －Kart | 41 | 316 | 399 |
| 566 | 67 | 19 － | 623 ． |  | 488 | Mo 8 Mar | 17 | 20 | Agra | $\pm 2$ | 317 | 400 |
| 567 | 68 | 19 － | $62+$ | Srav |  | Fr 25 Feb | 18 | 21 | Paush | 43 | 318 | 401 |
| ＊568 |  | 19 － | 625 |  |  | Fi 16 Mar | 19 | 22 | Magh | 44 | 319 | 402 |
| 569 | 70 | $19-$ | 626 |  | 491 | Tu E Mar | 20 | 27 | Phâl | 45 | 320 | 403 |
| 570 | 3671 | $19-$ | 627 | Jyesh | 492 | 2 Fr 21 Feb | 021 | 6224 | Chart | 46 | 321 | 404 |

[^53]TABLTE XVII－（Continued．）
General Table of Corresponding Dates．

| A．D | Soumb－Yeab |  | Lumi－Somar－Year． |  |  |  | JUPITER－CxCLES． |  |  |  | $\begin{aligned} & \text { 息 } \\ & \text { © } \\ & \text { 营 } \\ & 8 \end{aligned}$ | $\begin{aligned} & \text { 렴 } \\ & \text { 音 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underset{\text { Kali }}{\text { Kaga }}$ | Inftial Day． | $\left\|\begin{array}{c} \text { Fik } \\ \text { Sam } \end{array}\right\|$ | Intercal Month | $\left\lvert\, \begin{aligned} & \mathrm{gar} \\ & \mathrm{Sal} \\ & \hline \end{aligned}\right.$ | Initial Day | 80 Yeari |  | $\begin{gathered} 12 \\ \text { Yawn. } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | S Bid． | Tel． |  |  |  |  |
| 871 | 8872 | 20 Mar | 628 |  | 493 | Fr 18 Mar | O22 | 6228 | Fais | 47 | 822 |  |
| ＊ 672 | 78 | 19 － | 629 | － | 494 | We 2 Mar | 23 | 26 | Jyenh | 48 | 328 |  |
| 878 | 74 | 19 － | 630 | Vais | 498 | Ss 18 Feb | 24 | 27. | Anhad | 49 | 324 | 40 |
| 674 | 78 | 19 － | 631 |  | 496 | Fr 9 Mar | 28 | 28 | Brav | 80 | 325 |  |
| 575 | 76 | $20-$ | 682 | Bhad | 497 | We 27 Feb | 26 | 29 | Bhed | 51 | 826 |  |
| － 676 | 77 | $20-$ | 683 |  | 498 | Ta 18 Mar | 27 | 80 | Aawn | 52 | 327 |  |
| 577 | 78 | 19 － | 394 |  | 490 | Ss 6 Msr | 28 | 81 | Kart | 88 | 328 |  |
| 878 | 79 | $20-$ | 688 | Ashad | 800 | Th 24 Feb | 29 | 82 | Agra | 54 | 829 |  |
| 579 | 80 | $20-$ | 688 |  | 801 | We 15 Mar | 30 | 83 | Panah | 88 | 380 |  |
| －880 | 8581 | 19 － | 837 |  | 802 | 88 Mar | 81 | 84 | Magh | 58 | 831 |  |
| 581 | 8682 | 18 Mar | 638 | Vais | 603 | Th 20 Feb | 82 | 85 | Phal | 67 | 352 |  |
| 582 | 83 | $20-$ | 838 |  | 504 | Th 12 Mar | 38 | 86 | Chalt | 88 | 838 | 41 |
| 888 | 84 | $20-$ | 640 | （ Bhad | 508 | S． 27 Feb | 84 | 37 | Van | 69 | 884 |  |
| －884 | 85 | $10-$ | 11 |  | 506 | 519 Mar | 35 | 38 | Jyenh | 30 | 885 | 4 |
| 888 |  | $20-$ | 642 |  | 507 | F 9 Mar | 86 | 89 | Anhad | 61 | 886 |  |
| 586 | 87 | $20-$ | 643 | Srây | 508 | Ta 26 Feb | 37 | 40 | Brât | 62 | 897 |  |
| 887 |  | $20-$ | 644 |  | 509 | S 16 Mar | 88 | 41 | Bhad | 63 | 838 |  |
| － 888 |  | $19-$ | 645 |  | 810 | Fr 6 Mar | 89 | 42 | 4．wn | 64 | 889 |  |
| 589 | 80 | $20-$ | 648 | Jyesh | 511 | Mo 21 Feb | 40 | 48 | Elat | 85 | 840 |  |
| 890 | 8891 | $20-$ | 847 | ．．． | 512 | Mo 18 Mar | 41 | 44 | Agra | 66 | 841 |  |
| 891 | 8682 | 20 Mar | 648 |  | 818 | Fr 9 Mar | 42 | 46 | Pauch | 87 | 842 |  |
| －892 | 98 | $19-$ | 649 | Vade | 514 | Tz 19 Feb | 43 | 48 | Magh | 68 | 848 |  |
| 598 |  | 18 － | 680 |  | 815 | Mo 9 Mar | 44 | 47 | Phll | 69 | 844 |  |
| 594 | 95 | $20-$ | 351 | Bhad | 516 | Sa 27 Feb | 45 | 48 | Chait | 70 | 848 |  |
| 895 |  | $20-$ | 652 |  | 517 | F． 18 Mar | 48 | 49 | Vais | 71 | 848 |  |
| － 598 | 97 | $19-$ | 683 | 3 | 518 | Tr 8 Max | 47 | 80 | Jyeah | 12 | 847 |  |
| 597 | 98 | $19-$ | 634 | Ashad | 619 | Ba 23 Feb | 48 | 81 | Anhed | 78 | 848 |  |
| 598 | 99 | $20-$ | 858 |  | 620 | 8s 15 Mar |  | 82 | Brat | 74 | 8.9 |  |
| 699 | 3700 | $20-$ | 858 | 3 | 521 | We 4 Mar |  | 58 | Bhad | 75 | 880 |  |
| －600 | 8701 | 19 － | 867 | 7 Tald | 522 | Sn 20 Fab | 981 | $62 \mathrm{B4}$ | Aswa | 75 | 851 |  |

## WABLET XVII-(Oontinved.)

General Table of Corresponding Dates

| A. D. | Solab-YEAR |  | Luni-solab-Yram |  |  |  | Jupiter-Cicleis |  |  | $\begin{aligned} & \dot{\overrightarrow{0}} \\ & \text { 覓 } \\ & \stackrel{\rightharpoonup}{0} \\ & \dot{B} \end{aligned}$ |  | 鹿 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left.\begin{array}{\|} \text { Kall } \\ \text { Yagan. } \end{array} \right\rvert\,$ | Initial Day | $\left\|\begin{array}{l} V i k \\ s_{\mathrm{am}} \end{array}\right\|$ | Interoal Month. | $\left\|\begin{array}{c} \mathrm{Bak} \\ \mathrm{Bal} \end{array}\right\|$ | Inital Day | 60 Years |  | $\underset{\text { Yeara }^{12}}{ }$ |  |  |  |
|  |  |  |  |  |  |  | 5 Srd | Tel |  |  |  |  |
| 001 | 8702 | 20 Mar | 656 | - | 528 | Sa 11 Mer | 952 | 6285 | Kert | 77 | 352 |  |
| 602 | 03 | $20-$ | 659 | Bhad | 624 | We 28 Feb | 53 | SE | Agra | 78 | 853 |  |
| 608 | 04 | $20-$ | 660 |  | 528 | Tı 19 Mar | 64 | 6:1 | Paush | 79 | 354 |  |
| ${ }^{-604}$ | 05 | 19 - | 651 |  | 528 | 88 Mar | 65 | 58 | Magh | 80 | $8 s s$ |  |
| 605 | 06 | $20-$ | 562 | BrAv | 527 | Fr 26 Feb | 66 | 69 | Ph6l | 81 | 356 |  |
| 606 | 07 | $20-$ | 668 |  | 528 | Wo 16 Mar | 57 | 60 | Chalt | 82 | 357 | 0 |
| 607 | 06 | $20-$ | 664 |  | 529 | S 6 Mar | 68 | 831 | Va1s | 83 | 358 | 1 |
| -608 | 09 | $10-$ | 668 | Jyeah | 680 | We 21 Feb | 69 | 2 | Jyesh | 84 | 689 | 2 |
| 609 | 10 | 18 - | 666 |  | 531 | Wo 12 Mar | 60 | 8 | Ashad | 85 | B60 | 6 |
| 610 | 6711 | $20-$ | 667 | $\dagger$ | 632 | Mo 2 Max | 101 | 4 | Brâv | 86 | 981 | 4 |
| 611 | 6712 | 20 Mar | 666 | Vain | 839 | Th 16 F (0b | 2 | 6 | Bhad | 87 | 862 | 6 |
| -612 | 18 | 19 - | 869 |  | 694 | Th 9 Mar | 6 | 6 | Aswa | 68 | 868 | 6 |
| 818 | 14 | $20-$ | 670 | Bhad | 668 | Mo 28 Feb | 4. | 7 | Kirt | 69 | 864 | 7 |
| 614 | 18 | $20-$ | 671 |  | 638 | Mo 18 Mar | 6 | 8 | Agte | 90 | 868 | 8 |
| 616 | 16 | $20-$ | 672 |  | 687 | 5 S Mar | 6 | 0 | Paush | 91 | 888 | 9 |
| *616 | 17 | 19 - | 678 | Ashad | 538 | Tu 24 Feb | 7 | 10 | Magb | 82 | 567 | 10 |
| 617 | 16 | $20-$ | 67t | .. | 638 | Ta 15 Mar | 8 | 11 | Phal | 93 | 386 | 11 |
| 018 | 19 | $20-$ | 676 |  | 640 | Es 4 Mar | 9 | 12 | Chalt | 94 | 869 | 12 |
| 619 | 20 | $20-$ | 676 | Vain | 541 | Wo 21 Feb | 10. | 18 | Vain | Es | 870 | 16 |
| * 620 | 8721 | $20-$ | 677 |  | 842 | Tu 11 Mas | 11. | 14 | Jyenh | 96 | 671 | 14 |
| 621 | 6782 | 20 Mer | 676 | Bhad | 543 | Mo 1 Mar | 12 | 15 | Anhad | 97 | 872 | 16 |
| 622 | 98 | $20-$ | 679 | ... | 544 | Ft 10 Mar | 18 | 16 |  | 98 | 876 | 16 |
| 626 | 24 | $90-$ | 680 |  | 648 | Th 8 Mar | 14 | 17 | Bhad | 90. | 874 | 17 |
| 4824 | 25 | 19 - | 861 | Srdv | 646 | 85 25 Feb | 15 | 16 | Abwa | 100 | 678 | 18 |
| 626 | 98 | $20-$ | 682 |  | 647 | 8s 16 Mar | 16 | 19 | Kırt | 1 | 878 | 19 |
| 628 | 27 | $20-$ | 868 |  | 548 | Wo 6 Mar | 17 | 20 | Agrs | 2 | 677 | 80 |
| 627 |  | $20-$ | 684 | Jyeah | 649 | (s 22 Feb | 16 | 21 | Paunh | 8 | 376 | 21 |
| ${ }^{*} 626$ |  | 19 - | 688 |  | 650 | St 12 Mar | 10 | 22 | Magh | 4 | 879 | 22 |
| 629 | 80 | $20-$ | 686 | $\ddagger$ | 581 | Th 2 Mar | 20 | 23 | Phal | 6 | 880 | 28 |
| 680 | 8781 | $20-$ | 667 | Chatt | 662 | Ta 20 Fob | 1021 | 6324 | Chalt | 6 | 561 | 24 |

TABLIT XVII．－（Continued）
General Table of Corvespondang Dates

| A 1 | Solab－Yeab． |  | Lumi－Solar－Yram |  |  |  | Jupitem－CYCles． |  |  |  |  | $\begin{gathered} \text { 甫 } \\ \text { 佨 } \\ \text { 总 } \\ \text { 畐 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { Kalı } \\ \text { Yuga } \end{array}$ | Initinl Day | $\left\|\begin{array}{c} V_{1 k} \\ S_{2} \end{array}\right\|$ | Intercal Month | $\left\lvert\, \begin{aligned} & \text { Sak } \\ & \text { Sal } \end{aligned}\right.$ | Initial Day | 60 Years |  | $\underset{\text { Yearg }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 631 | 3732 | 20 Mar | 688 |  | 653 | We 10 Mar | 1022 | 6325 | Vals | 7 | 382 | 28 |
| ${ }^{*} 632$ | 33 | $20-$ | 689 | Bhèd | 554 | Fr 28 Feb | 23. | 26 | Jyesh | 8 | 383 | 26 |
| 633 |  | $20-$ | 690 |  |  | We 17 Mar | 24 | 27 | Ashad | 9 | 384 | 27 |
| 634 | 35 | $20-$ | 601. |  | 856. | Mo 7 Mar | 25. | 28 | Srat | 10 | 385 | 28 |
| 635 |  | $20-$ | 692 | Ashad | 5671 | Fr 24 Feb | 26 | 29 | Bbed | 11 | 386 | 29 |
| ${ }^{*} 636$ |  | 20 | 693 |  | 858 | Th 14 Mar | 27 | 30 | Aswa | 12 | 387 | 30 |
| 637 | 38 | 20 | 694 |  | 859 | Tu 4 Mar | 28 | 31 | Kärt | 13 | 388 | 31 |
| 638 |  | 20 | 695 | Va： | 860 | Sa 21 Feb | 29 | 32 | Agra | 14 | 389 | 32 |
| 639 | 40 | 20 | 696 |  | $561{ }^{1}$ | Th 11 Mar | 30 | 33 | Paush | 15 | 390 | 33 |
| ＊ 640 | $37+1$ | 20 | 697 | Bhâd | 562 | Tu 29 Feb | 31 | 34 | Magh | 16 | 391 | 34 |
| 641 | 3742 | 20 Mar | 698 |  | 563 | Mo 19 Mar | 32 | 35 | Phal | 17 | 392 | 35 |
| 642 | 43 | 20－ | 609 |  | 664 | Fr 8 Mar | 33 | 36 | Cbalt | 18 | 393 | 86 |
| 643 | 44 | $20-$ | 700 | Asbad | 565 | 1u 25 Feb | 34 | 37 | $\nabla_{\text {a }}$ | 19 | 394 | 37 |
| ＊644 |  | $20-$ | 701 |  | 566 | Tu 16 Mar | 38 | 38 | Jyenh | 20 | 395 | 38 |
| 645 |  | 20 － | 702＇ |  | 50.7 | Sa 6 Mar | 36 | 39 | Ashad | 21 | 396 | 39 |
| 646 | 47 | $20-$ | 703 | Jyerht | 568 | We 22 Feb | 37 | 40 | Sráv | 22 | 397 | 40 |
| 647 |  | $20-$ | 704 |  | 5.69 | Tu 13 Mas | 38 | 41 | Bhad | 23 | 398 | 41 |
| ＊848 |  | $20-$ | 708 | Kart | 570 | $\mathrm{S} \quad 2 \mathrm{Mar}$ | 39 | 42 | Abws | 24 | 399 | 42 |
| 649 |  | $20-$ | 706 |  | 671 | Fr 20 Mar | 40 | 48 | Kart | 25 | 400 | 43 |
| 650 | 3781 | $20-$ | 707 |  |  | Ta 9 MBL | 42 | 44 | －Paush | 26 | 401 | 44 |
| 651 | 3782 | 20 Mar | 708 | Srây | 873 | S 27 Feb | 43 | 48 | Màgh | 27 | 402 | 48 |
| ＊652 | 83 | $20-$ | 708 |  |  | Sat 17 Mar | 44. | 46 | Phal | 28 | 403 | 46 |
| 653 |  | $20-$ | 710 |  | 575 | We 6 Mar | 45 | 47 | Ohart | 29 | 404 | 47 |
| 654 | 88 | $20-$ | 711 | Ashad | 676 | Mo 24 Frab | 46 | 48 | Vals | 30 | 405 | 48 |
| 685 |  | $20-$ | 712 |  | 877 | Sat 14 Mar | 47 | 49 | Jyesh | 31 | 406 | 49 |
| ＊638 |  | $20-$ | 713 |  | 578 | Th 3 Mar | 48 | 50 | Ashad | 32 | 407 | 50 |
| 657 | 88 | $20-$ | 714 | Vals | 579 | Mo 20 Feb | 49 | 51 | Sriv | 33 | 408 | 81 |
| 658 |  | $20-$ | 715 |  | 880 | S 11 Mar | 50 | 52 | Bhad＇ | 34 | 409 | 52 |
| 669 | 60 | $20-$ | 716 | Bh8d | 581 | Fr 1 Mar |  | 53 | Aswa | 35 | 410 | 58 |
| ＊660 | 3761 | $20-$ |  |  | 582 | Th 19 Mar | 1052 | 6354 | Kert | 38 | 411 | 154 |

## TABLII XVIL-(Continued)

General Table of Corresponding Dates

TABLT XVII.-(Oontinaed.)
General Table of Corresponding Dates.

| A. D | Solam-Year |  | LURI-SOLAz-YEAR. |  |  |  | Jopttre-Ctoles. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kali <br> Yuga | Initial Day | $\left\lvert\, \begin{aligned} & \nabla_{2}, \\ & \operatorname{Sam} \end{aligned}\right.$ | Intereal Month | $\begin{aligned} & \mathrm{Bak}_{\mathrm{a}} \\ & \mathrm{Sanl}^{2} \end{aligned}$ | Initial Day | 60 Years. |  | $\begin{gathered} 12 \\ \text { Yoars. } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | 3 sid | Tel. |  |  |  |  |
| 091 | 8792 | 21 Mar | 748 |  | 613 | Te 7 Mar | 11,29 | 0426 | Jyeeh | 67 | 442 | 88 |
| -698 | 98 | 21 | 749 | Ashad | 614 | Be 24 Feb | 24 | 26 | Lehed | 56 | 448 | 86 |
| 688 | 94 | 20 | 780 |  | 618 | Fr 14 Mar | 25 | 27 | 8riv | 69 | 444 | 87 |
| 694 | 95 | 20 | 751 |  | 616 | Tz 8 Mar | 96 | 28 | Bhad | 70 | 445 | 68 |
| 098 | 98 | 21 | 752 | Ohait | 617 | ( 21 Fab | 27 | 22 | Aswe | 71 | 448 | 89 |
| - 898 | 97 | 20 | 753 |  | 818 | S. 11 Mar | 28 | 60 | Kfrt | 72 | 447 | 90 |
| 497 | 96 | 20 | 754 | Bhad | 518 | Wea 28 Feb | 29 | 81 | Agra | 73 | 448 | 91 |
| 698 | 99 | 21 | 756 | . | 620 | Fr 19 Mar | 80 | 82 | Panah | 74 | 448 | 92 |
| 099 | 8800 | 21 | 758 |  | 621 | 8s 8 Mar | 81 | 88 | Magh | 75 | 450 | 88 |
| - 700 | 8801 | 21 | 757 | Ashad | 622 | W0 25 Feb | 82 | 84 | Phal | 78 | 451 | 4 |
| 701 | 3802 | 21 Mar | 758 | ... | 823 | Wed 16 Mar | 83 | 85 | Chait | 77 | 452 | 95 |
| 702 | 08 | 21 - | 759 | . | 629 | S 5 Mar | 84 | 80 | Vain | 76 | 458 | 96 |
| 703 | 04 | 21 - | 760 | Jyeah | 825 | Th 22 Feb | 85 | 87 | Jyeah | 78 | 454 | 9 |
| -704 | 08 | $20-$ | 761 | ** | 628 | We 12 Mar | 86 | 88 | Achad | 80 | 486 | 0 |
| 708 | 08 | $20-$ | 762 | Aswe | 527 | S 1 Mar | 87 | 39 | Brat | 81 | 456 | 88 |
| 706 | 07 | 21 - | 788 |  | 628 | Mo 21 Mar | 88 | 40 | Bhid | 82 | 457 | 100 |
| 707 | 08 | 22 - | 784 | . | 829 | Fr 10 Mar | 89 | 41 | Aswa | 88 | 458 | 101 |
| -708 | 09 | 21 | 765 | Sriv | 680 | Tu 28 Fob | 40 | 42 | Kart | 84 | 459 | 102 |
| 709 | 10 | 21 | 766 |  | 681 | Ta 18 Mar | 41 | 48 | Agra | 65 | 460 | 108 |
| 710 | 8811 | 21 | 787 | - | 682 | Ba 7 Mar | 42. | 44 | Paugh | 86 | 481 | 104 |
| 711 | 8812 | 21 Mar | 788 | Jyeah | 688 | Mo 28 Feb | 48 | 45 | MEgh | 87 | 482 | 108 |
| -712 | 18 | 21 | 789 |  | 684 | T\% 14 Mar | 44 | 48 | Phal | 68 | 463 | 100 |
| 718 | 14 | 21 | 770 |  | 685 | Mo 3 Mar | 45 | 47 | Chalt | 69 | 464 | 107 |
| 714 | 15. | 21 | 771 | Chait | 636 | Tu 20 Feb | 46 | 48 | Vals | 80 | 455 | 108 |
| 715 | 16 | 21 | 772 | . | 887 | Mo 11 Mar | 47 | 49 | Jyech | 01 | \$60 | 109 |
| *716 | 17 | 21 | 778 | Srev | 688 | Fs 28 Fab | 48 | 50 | Ashad | 92 | 467 | 110 |
| 717 | 18 | 21 | 774 |  | 689 | It 10 Mar | 40 | 51 | Arav | 96 | 468 | 111 |
| 716 | 19 | 21 | 775 | ... | 640 | Ta 83mr | 80 | 52 | Bhad | 94 | 458 | 112 |
| 719 | 20 | 21 | 775 | .. | 661 | B4 28 Fab | 81 | 68 | Aswa | 85 | 470 | 118 |
| * 720 | 8821 | 21 | 777 | Ashad | 648 | ge 18 Mar | 11.52 | 64.64 | Fert | 96 | 471 | 114 |

TABLE XVII.-(Continued)
Gencial Tuble of Comesponding Dates


TABLE XVII-(Continued.)
General Table of Corresponding Dates


[^54]TABLE XVII -(Continued.)
General Table of Cor responding Dates.

| A. D | Solar Year |  | Lujxi-Solar Yeam. |  |  |  | Juptran-Cioles |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initial Day | $\left\{\begin{array}{l} V_{1 k} \\ \mathrm{Sam} \end{array}\right.$ | Intercal Month | $\left\lvert\, \begin{aligned} & S_{\text {ak }} \\ & S_{81} \end{aligned}\right.$ | Inital Day | 60 Years |  | ${ }_{\text {Years }}^{12}$ |  |  |  |
|  |  |  |  |  |  |  | (8 S $\mathrm{S}_{1}$ | Tel |  |  |  |  |
| 781 | 3882 | 21 Mar | 838 | Bhid | 703 | Th 1 Mar | 1254 | 65 55 | Paurh | 87 | b32 | 175 |
| 782 | 83 | 21 - | 839 |  | 704 | We 20 Mar | 58 | 56 | Mâgh | 58 | 533 | 176 |
| 783 | 84 | $22-$ | 840 |  | 705 | S 9 Mar | 56 | B7 | Phil | 59 | 584 | 177 |
| *784 | 85 | 21 - | 811 | Ashad | 706 | Th 26 Feb | 57 | B8 | Chait | 50 | 535 | 178 |
| 785 | 86 | $21-$ | 842 |  | $70 \%$ | Th 17 Mar | 58 | 59 | Vaia | 61 | E36 | 179 |
| 786 | 87 | 21 - | 843 |  | 708 | Mo B Mar | 59 | 60 | Jyeah | 52 | 537 | 180 |
| 787 | 88 | $22-$ | 844 | Jyesh | 709 | Sa 24 Feb | 60 | 681 | Aahnd | 63 | 538 | 181 |
| *788 | 89 | 21 - | 815 |  | 710 | Th 13 Mar | 131 |  | Briv | 64 | 839 | 182 |
| 789 | 90 | 21 - | 846 | Aswa | 711 | Th 3 Mar |  | 8 | Bhàd | 65 | 540 | 183 |
| 790 | 3891 | 21 - | 81.1 |  | 712 | S 21 Mar |  |  | Aswa | 66 |  | 184 |
| 791 | 3892 | 21 Mar | 848 |  | 713 | Th 10 Mar | 4 | 5 | Kîrt | 67 | 542 | 185 |
| -702 | 93 | 22- | 849 | Srav | 714 | Wo 29 Feb | 5 | 6 | Agra | 68 | 543 | 186 |
| 793 | 94 | 21 - | 850 |  | 716 | Mo 18 Mar | 6 | 7 | Paush | 69 | 544 | 187 |
| 794 | 95 | 22 - | 851 |  | 716 | Sa 8 Mar | 7 | 8 | Mâgh | 70 | 545 | 188 |
| 798 | 96 | $22-$ | 852 | Ashad | 717 | We 25 Feb | 8 | 9 | Phal | 71 | 545 | 189 |
| *796 | 97 | 21 - | 857 |  | 718 | Tu 15 Mar | 9 | 10 | Chait | 72 | 547 | 190 |
| 797 | 98 | 21 - | 854 |  | 719 | 8 A ( Mar | 10 | 11 | Vais | 73 | 648 | 191 |
| 798 | 99 | 21 - | 885 | Vars | 720 | We 21 Feb | 11 | 12. | Jyesh | 74 | 549 | 192 |
| 799 | 8900 | $22-$ | 856 |  | 721 | Tu 12 Mar | 12 | 13 | Ashad | 78 | S50 | 193 |
| *800 | 3901 | 21 - | 857. | Bhâd | 722 | 32 Mar | 13 | 14 | Srêy | 76 | 551 | 194 |
| 801 | 3902 | 21 Mar | 858 |  | 723 | Sa 20 Mar | 14 | 15 | Bhad | 77 | 652 | 195 |
| 802 | 03 | 21- | 889 |  | 724 | We 9 Mar | 15 | 18 | Aswa | 78 | 553 | 196 |
| 803 | $0 \pm$ | 22 - | 860 | Ashad | 75 | Mo 27 Feb | 16 | 17. | Kart | 78 | B54 | 197 |
| *804 | 05 | $21-$ | 861 |  | 726 | Sa 16 Mar | 17 | 18 | Agrs | 80 | BEE | 198 |
| $80 \overline{ }$ | 06 | 21 - | 852 |  | 727 | We $\delta$ Mar | 18 | 19 | Paush | 81 | 556 | 109 |
| 806 | 07 | $22-$ | 868 | Jyesh | 728 | Mo 23 Feb | 19 | 20 | Magh | 82 | 857 | 200 |
| 807 | 08 | 22 - | 864 |  | 729 | S 14 Mar | 20 | 21 | $\mathrm{Ph}{ }^{\text {ct }}$ | 83 | 558 | 201 |
| -808 | 09 | $21-$ | 865 | Aswa | 790 | Th 2 Mar | 21 | 22 | Chait | 84 | 589 | 202 |
| 809 | 10 | 21 - | 866 |  | 781 | We 21 Mar |  | 23 | Vais | 85 | 560 | 208 |
| 810 | 8911 | $22-$ | 857 |  | 732 | Mo 12 Mar | 1323 | 0824 | Jyerh | 88 | 561 | 204 |

## TABLE XVII -(Continued.)

General Table of Corresponding Dates

| $\triangle$ D | Solah Year |  | Tumi Solar Yeam |  |  |  | Jupiren Cyclas |  |  |  |  | Harsha Kâl |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { K.alı } \\ \text { Yuga } \end{gathered}$ | $\begin{gathered} \text { Initial } \\ \text { Day } \end{gathered}$ | $\left\|\begin{array}{l} \mathrm{Vik} \\ \mathrm{Sam} \end{array}\right\|$ | Interoal Month | $\left\|\begin{array}{c} \mathrm{Saik}^{2} \\ \mathrm{Sal} \end{array}\right\|$ | Intiaı Day | $66^{\text {6 }}$ Years |  | $\underset{Y \text { Bars }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sud | Tel |  |  |  |  |
| 811 | 3912 | 22 Mar | 868 | Srấ | 733 | Fr 28 Feb | 1324 | 6825 | Asbad | 87 |  | 205 |
| * 812 |  | 21 - | 869 |  | 734 | Th 18 Mar | 25 | 26 | Srav |  | 563 | 206 |
| 818 | 14 | $21-$ | 870 |  | 735 | Mo 7 Mar | 26 | 27 | Bhâd |  | 564 | 207 |
| 814 | 15 | $21-$ | 871 | Ashad. | 736 | Er 24 Feb | 27 | 28 | Asws | 90 | 565 | 208 |
| 815 | 16 | 22 - | 872 |  | 737 | Fr 16 Mar | 281 | 29 | Kurt | 91 | 566 | 205 |
| * 816 | 17 | $22-$ | 873 | - | 7381 | We 6 Mar | $29^{\prime}$ | 30 | Agra | 92 | 665 | 210 |
| 817 | 18 | $21-$ | 874 | Vals | 739 | Sa 21 Feb | 30 | 31 | Paush | 9: | 508 | 211 |
| 818 | 19 | $22-$ | 875 |  | 740 | Sa 13Mat | 31 | 32 | Magb | 94 | 569 | 212 |
| 819 | 20 | $22-$ | 876 | Bhad | 741 | We 2 Mar | 32 | $3{ }^{3}$ | Phul | 95 | 570 | 213 |
| *820 | 3921 | 21 - | 877 |  | 742 | Mo 19 Mar | 84 | 31 | Yals |  | 571 | 214 |
| 821 | 5922 | 21 Mar | 878 |  | 743 | Sb OMal | $3)$ | 33 | Jyesh | 97 | 572 | 218 |
| 822 | 23 | $22-$ | 874 | Ashad | 714 | Th 27 Fcb | 36 | 36 | Ashad | 98 | 573 | 216 |
| 823 | 24 | 22 - | 880 |  | 740 | Tu 17 Mm | 77 | 37 | Sruy |  | -374 | 217 |
| -824 | 25 | 21 - | 881 |  | 746. | Sa 6 Mar | 38 | 38 | Brad | 100 | 575 | 218 |
| 825 | 26 | 21 - | 882 | Jyesh | 747 | Th $23 \begin{aligned} & \text { r }\end{aligned}$ | 30 | 30 | Aswa |  | 576 | 219 |
| 826 | 27 | 22 - | 883 |  | 748 | We 14 Mat | 40 | 40 | Kurt |  | 875 | 220 |
| 827 | 28 | 22 - | 884 | 4 Ashad | 749 | S 3 Mar | 41 | 41 | Agra |  | 578 | 221 |
| * 828 | 29 | 22 - | 885 |  | $750$ | S 22 Mai | 42 | 42 | Pausb |  | 570 | 222 |
| 820 | 30 | 21 - | 886 |  | $7 \mathrm{~F}_{1}$ | We 10 Ma | 43 |  | Magh |  | 560 | 223 |
| 830 | 9981 | 28 - | 887 | Sı自v | 532 | Mo 28 Гeb | 44 | 44 | Phal |  |  | 224 |
| 831 | 3032 | 22 Mar | 888 |  | 733 | 319 Mar | 45 | 45 | Chast |  | 582 | 220 |
| *832 | 33 | 22 - | 889 |  | 754 | Tr 8 Mar | 5 | 46 | $\mathrm{V}_{\mathrm{n} 1 \mathrm{~s}}$ |  | 8. 583 |  |
| 893 | 34 | $22-$ | 890 | Ashad | \%is) | Tu こ; $\Gamma_{\text {¢ }}$ | 4 | 47 | Jyebh |  | 684 | 227 |
| 834 | 35 | 22 - | 801 |  | 760 | No 16 Mar | 48 | 4 N | Ashad |  | 585 | 228 |
| 835 | 36 | $22-$ | $\mathrm{SO2}$ |  | 752 |  | 49 | 4 | Sump | 11 | 586 |  |
| *886 | 87 | 22 - | 893 | 3 Chatt | 75 | Wr 23 Feb | 50 | 8 | Bhâd |  | 587 | ' 230 |
| 837 | 38 | $22-$ | 894 |  | 759 | Mo 12 Max | 51 | 61 | Asive |  | 588 | 231 |
| 838 | $39$ | $22-$ | 805 | Srav | 760 | Fr 1 Mnr | 52 | 52 | Kîrt |  | 580 | 232 |
| 889 |  | $22-$ | 896 |  | 761 | Th 20 Mnr | 53 |  | Agra |  |  | 233 |
| * 840 | 8941 | 21 - | 897 | . | 762 | Mo 8 Mar | 1354 | 66 E4 | Paush |  | 501 | 234 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE XVLI -(Continued)
General Table of Corresponding Dates


TABLE XVII－（Continued．）
General Table of Corresponding Dates．

| A D | Solar Year |  | Luni－Solar．Year |  |  |  | Jupimer－Gyoles． |  |  |  | $\begin{aligned} & \text { 总 } \\ & \text { 另 } \\ & \text { 券 } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\|\begin{array}{c} \text { Kaha } \\ \text { Yuga } \end{array}\right\|$ | Initial Day | $V_{1 k}$ <br> Sam | Intercal <br> Month | Sak Sal | Intial Day | 60 Years |  | ${ }_{Y e a r s}^{12}$ |  |  | E |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  | 官 |
| 871 | 3072 | 22 Mar | 928 | Jyesh | 793 | Sa 24 Feb | 1425 | 6725 | $\mathrm{Sr} \mathrm{Sv}^{2}$ | 47 | 822 | 28 |
| ＊872 | 73 | 22 － | 920 |  | 704 | Sa 15 Mar | 26 | 26 | Bhad | 48 | 628 | 26 |
| 873 | 74 | 22 － | 030 |  | 795 | We 4 Mar | 27 | 27 | Abwa | 49 | 624 | 26 |
| 874 | 75 | $22-$ | 931 | Chait | 796 | Mo 22 Feb | 28. | 28 | Kât | 50 | 625 | 268 |
| 875 | 76 | 22 － | 932 |  | 797 | Tu 12 Mar | 29 | 29 | Agra | 51 | 626 | 88 |
| ＊876 | 77 | 22－ | 933 | $\mathrm{Sr} \mathrm{H}_{7}$ | 798 | Th 1 Mar | 30 | 30 | Paneh | 52 | 827 | 270 |
| 877 | 78 | 22 － | 934 | ．． |  | We 20 Mar | 31 | 31 | MAgh | 58 | 828 | 271 |
| 878 | 79 | 22 － | 935 | ．． | 800 | $3 \quad 9 \mathrm{Mar}$ | 32 | 32 | Phal | 54 | 629 | 72 |
| 879 | 80 | 22 － | 336 | Ashad | 801 | Th 26 Feb | 39 | 83 | Cbait | 56 | 630 | 73 |
| ＊ 880 | 3981 | 22 | 937 |  | 802 | We 16 Mar | 34 | 84 | Vass | 56 | 831 | 274 |
| 881 | 3082 | 22 Mar | 938 |  | 809 | Mo 6 Mar | 35 | 36 | Jyesh | 57 | 632 | 275 |
| 882 | 83 | 22 － | 939 | Ve18 | 804 | Fr 23 Feb | 36 | 36 | Asbad | 58 | 638 | 276 |
| 889 | 84 | 22－ | 40 |  | $80 \%$ | We 13 Mar | 37 | 87 | Sray | 59 | 634 | 277 |
| ＊884 | 80 | $22-$ | 11 | Bhend | 806 | Tu 3 Mar | 38 | 38 | Bhâd | 60 | 085 | 278 |
| 885 | 86 | 22 － | 942 |  | 807 | 521 Mar | 39 | 39 | Aswa | 62 | 636 | 78 |
| 886 | 87 | 22 － | 943 |  | 808 | Th 10 Mar | 40 | 40 | Kalt | 62 | 637 | 80 |
| 887 | 88 | 22 － | 944 | Srív | 09 | Mo 27 Feb | 41 | 41 | Agra | 68 | 638 | 81 |
| ＊888 | 80 | 22 － | 945 |  | 810 | Mo 18 Mur | 43 | 42 | Paush | 64 | 639 | 282 |
| 880 | 90 | 22 － | 6 |  |  | Fr 7 Mar | 43 | 43 | Magh | 68 | 640 | 88 |
| 890 | 3991 | 22 － | 947 | Jyeeh |  | Tu 24 Feb | 44 |  | Phal | 66 | 611 | 284 |
| 891 | 3992 | 22 Mar | 948 |  | 813 | Mo 15 Mar |  |  | Chart | 67 | 642 | 285 |
| ＊802 | 93 | $22-$ |  | $\dagger$ | 4 | Sa 4 Mar | 46 | 46 | Vois | 68 | 3 | 86 |
| 899 | 94 | 22 － | 950 | Chart | 815 | We 21 Feb | 47 |  | Jjesh | 69 | ＋ | 287 |
| 894 | － | 22 | 951 |  | 816 | Fr 12 Mar | 48 | 48 | Ashad | 70 | 645 | 288 |
| 890 | 96 | 22 － | 952 | Sraf | 817 | Sa 1 Mar | 40 | 49 | Srâr | 71 | 646 | 80 |
| ＊896 | 97 | 22 | 953 |  |  | Sa 20 Mar | 50 | 50 | Bhâd | 72 | 647 | 290 |
| 897 | 98 | 22 － | 95.4 |  |  | We 9 Mar | 51 | 51 | Aswa | 78 | 648 | 291 |
| 898 | 99 | 22 － | 955 | Ashad |  | $\mathrm{S} \quad 26 \mathrm{Feb}$ | 53 | 52 | Kart | 74 | 640 | 292 |
| 899 |  | $23-$ | 956 |  |  | Sa． 17 Mar |  |  | Agra | 75 | 650 | 298 |
| ＊900 | 4001 | $23-$ | 957 |  |  | We 6 Mar | 1454 | 6751 | Paubh | 76. | 681 | 20 |

$\dagger$ Kertika omuted，und EZruka iutercalary．

## TABLㅉ XVII－（Continued）

General Table of Corresponding Dates

| A D | golar－Year |  | Luni Solar Year |  |  |  | Jupiter Cycles |  |  | $\left\|\begin{array}{c} \text { 娄 } \\ \text { 关 } \\ \text { 费 } \\ 0 \end{array}\right\|$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { Kalı } \\ \text { Yuga } \end{array}$ | Initial Dey | $\left\|\begin{array}{c} \nabla_{1 k} \\ S_{a m} \end{array}\right\|$ | $\begin{array}{\|l\|} \text { Intercal } \\ \text { Month } \end{array}$ | $\left\|\begin{array}{l} \mathrm{Sak}^{\mathbf{8 a l}} \mid \end{array}\right\|$ | Initual Day | 60 Years |  | $\underset{\mathrm{Yetlls}}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S S ${ }_{\text {d }}$ | Tel |  |  |  |  |
| 901 | 4002 | 22 Mar | 958 | Vels | 823 | S 22 Feb | 145 | 6756 | Magrh | 7 | 652 | $20 i$ |
| 902 | 03 | 23 － | 959 |  | 82－1 | S 14 Mar | E6 | 6 E | Phal | 78 | 633 | 29 |
| 903 | 04 | 23 － | 960 | Bhad | 823 | Th 3 Mar | 87 | 67 | Chast | 79 | 654 | 247 |
| ＊904 | 05 | 22 － | 961 |  |  | We 21 Mar | 58 |  | Vala | 80 | G0\％ | 298 |
| 808 | 06 | 22 － | 962 |  |  | S 10 Mar | co |  | －Ashad | 81 | Ging | 299 |
| 906 | 07 | $23-$ | 963 | Srây | 828 | Fr 25 Feb | $15 \quad 1$ | 60 | $\mathrm{S}_{1} \mathrm{~A} \mathrm{~V}$ | 82 | 657 | 800 |
| 907 | 08 | $23-$ | 964 |  | $829$ | Th 19 Mar |  | 681 | Bbid | 83 | 658 | 301 |
| ＊908 | 09 | 22 － | 960 |  | 830 | Mo 7 Mar | 3 |  | Aswa | 84 | 658 | 302 |
| 909 | 10 | 22 － | 966 | Jyech | 831 | Fr 24 Feb | 4 | 3 | Kârt | 85 | 660 | 303 |
| 910 | 4011 | 23 | 967 |  | 832 | Th 16 Mar | 5 | 4 | Agra | 86 | 661 | 304 |
| 911 | 4012 | 23 Mar | 968 | $\dagger$ | 833 | Tu 6 Mar | 6 | 5 | Paush | 87 | 662 | 305 |
| ＊912 | 13 | 22 － | 969 | Chart | 834 | S 23 Feb | 7 | 6 | Megh | 88 | 663 | 306 |
| 913 | 14 | $23-$ | 970 |  | $8 \pi$ | $\mathrm{S}_{8} 13 \mathrm{Mar}$ | 8 | 7 | Pbal | 80 | COt | 307 |
| 914 | 15 | 22 － | 971 | Srẫ | 830 | Tu 1 Mar |  | 8 | Cbart | 00 | 665 | 308 |
| 915 | 16 | 23 － | 972 |  | 877 | Mo 20 Mar | 10 | 0 | Vais | 01 | 660 | 300 |
| ＊916 | 17 | 22 － | 973 |  | 888 | Fr 8 Mar | 11 | 10 | Jyesh | 02 | 67 | 310 |
| 917 | 18 | 22 － | 971 | Ashad | 830 | Tu 25 Feb | 12 | 11 | Ashad | 93 | c68 | 11 |
| 918 | 19 | 22 － | 975 |  | 840 | Mo 16 Mar | 13 | 12 | Stip | 94 | 668 | 812 |
| 919 | 20 | 23 － | 976 |  | 841 | $\mathrm{Sa} \quad 6 \mathrm{Mar}$ | 14 | 13 | Bhad | 95 | 670 | 813 |
| ＊920 | 4021 | 22 － | 977 | Vais | 842 | We 23 Feb | 18 | 14 | Abwa | 06 | 671 | 814 |
| 921 | 4022 | 22 Mar | 978 |  | 843 | Tu 13 Mar | 16 | 15 | Kärt | 97 | 672 | 3100 |
| 922 | 23 | 22 － | 979 | Bhâd | 84t | $\mathrm{Sa} \quad 2 \mathrm{Mar}$ | 17 | 16 | Agra | 98 | 678 | 316 |
| 923 | 24 | $28-$ | 980 |  | 845 | Ba 22 Mar | 18 | 17 | Paush | 09 | 674 | 317 |
| ＊924 | 25 | $22-$ | 983 |  | 846 | We 10 Mar | 10 | 18 | Mâgh | 100 | 675 | 318 |
| 925 | 26 | 22 － | 982 | Ashad | 817 | S 27 Feb | 20 | 19 | Phal | 1 | 670 | 910 |
| 926 | 27 | 22 － | 983 |  | 848 | Sa 18 Mar | 21 | 20 | Chait |  | 677 | 320 |
| 927 | 28 | $23-$ | 884 |  | 849 | Th 8 Mal | 22 | 21 | Vass | 8 | 678 | 321 |
| ＊928 | 20 | 22 － | 985 | Jyeah | 850 | Mo 25 Feb | 23. | 22 | Jyenh | 4 | 679 | 322 |
| 929 | 30 | 22 － | 986 |  | 851 | Sa 14 Mar |  |  | Ashad |  | 680 | 328 |
| 930 | 4031 | 22 － | 987 | Aswa | 852 | Th 4 Mar | 1625 | 6824 | Srav | 6 | 681 | 824 |

## TABLI XVII - (Continued)

General Table of Connesponding Dates.

| A D | Solar-Year |  | Luni-Solar-Year |  |  |  | Jupiter-Cycles |  |  |  | $\begin{gathered} \text { 震 } \\ \text { 总 } \end{gathered}$ | Harsha Kal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\lvert\, \begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}\right.$ | $\begin{aligned} & \text { Initial } \\ & \text { Day } \end{aligned}$ | $\left\|\begin{array}{c} \text { Vik } \\ \text { Sam } \end{array}\right\|$ | Intercal Month | $\underset{\substack{S_{a k} \\ S_{a l}}}{ }$ | Inital Day | 60 Years |  | $\begin{gathered} 12 \\ \text { Years } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 931 | 4032 | 23 Mar | 988 |  | 853 | We 29 Mar | 1526 | 6825 | Bhàd | 7 | 682 | 720 |
| -932 | 33 | 23 - | 989 |  | 854 | Mo 12 Map | 27 | 26 | Aswa | 8 | 683 | 326 |
| 931 | 34 | $22-$ | 990 | Srî̀ | 855 | Fr 1 Mar | 28 | 27 | Kart |  | 684 | 327 |
| 934 | 35 | 23 - | 991 |  | 856 | Th 20 Mar | 29 | 28 | Agra | 10 | 68\% | 328 |
| 935 | 36 | 29 - | 992 |  | 857 | Mo 9 Mar | 30 | 29 | Paush | 11 | 686 | 329 |
| *936 | 37 | $23-$ | 943 | Ashad | 878 | Sa 27 Fcb | 31 | 30 | Magh | 12 | 687 | 330 |
| 937 | 38 | $22-$ | 994 |  | 859 | Th 16 Ma | 92 | 31 | Phal | 13 | 688 | 331 |
| 938 | 39 | $23-$ | 995 |  | 860 | Tu 6 Maz | 33 | 32 | Cbait | 14 | 689 | 832 |
| 939 | 40 | $23-$ | 996 | Va1s | 861 | Sa 29 Fcb | 31 | 33 | Vals | 15 | 690 | 33. |
| -980 | 4041 | 22 - | 997 |  | 862 | Fr 13 Mar | 35 | 34 | Jyesh | 16 | 691 | 334 |
| 941 | 4042 | 22 Mar | 998 | Bhad | 863 | Tu 2 Mar | 36 | 35 | Aghad | 17 | 692 | 335 |
| 942 | 43 | 23 - | 999 |  | $86 t$ | Mo 21 Mar | 37. | 30 | Srât | 18 | b)3 | 330 |
| 943 | 44 | $23-$ | 1000 |  | 865 | Fr 10 Mal | 38 | 37 | Bhad | 19 | 694 | 337 |
| *944 | 48 | 22 - | 1001 | Ashad | 866 | We 28 Feb | 39 | 38 | Aswa | 20 | 695 | 348 |
| 945 | 46 | 28 - | 1002 |  | 867 | Tu 18 Mar | 40 | 39 | Kart | 21 | 696 | 339 |
| 946 | 47 | 23 - | 1003 |  | 868 | 57 Mar | 41. | 40 | Agra | 22 | 697 | 940 |
| 947 | 48 | 23 - | 1004 | Jyesh | 869 | We 24 Feb | 42 | 41 | Paush | 23 | 698 | 341 |
| *948 | 49 | 22 - | 1005 |  | 870 | Mo 14 Mar | 43 | 42 | Mâgh | 24 | 699 | 342 |
| 949 | 50 | 22 - |  | Aswa | 871 | Sa 3 Mar | 44 | 49 | Phál | 25 | 700 | 343 |
| 950 | 4051 | $23-$ |  |  | 872 | Sa 23 Mar |  | 44 | Chalt |  | 701 | 344 |
| 951 | 4052 | 23 Mar | 1008 | . | 873 | We 12 Mar | 46 | 45 | Vals | 27 | 702 | 34 |
| *952 | 53 | 22 - | 1009 | Srav | 874. | S 29 Feb | 47 | 46 | Jyeah | 28 | 703 | 346 |
| 953 | 54. | 22 - | 1010 |  | 875 | Sa 19 Mar | 48 | 47 | Ashed | 29 | 704 | 947 |
| 954 | 55 | $23-$ | 1011 |  | 876 | Th 9 Mar | 49 | 48 | Srav | 30 | 705 | -348 |
| 955 | 56 | 23 - | 1012 | Jyeah | 877 | Mo 26 Feb | 50 | 49 | Bhed | 31 | 706 | 349 |
| *956 | 57 | $22-$ | 1013 | ** | 878 | S 16 Mar | 51 | 50 | Aswe | 32 | 707 | 7350 |
| 957 | $58$ | $22-$ | 1014 |  | 879 | Th 5 Mar | 52 | 51 | Kart | 83 | 708 | 851 |
| 958 | 59 | 23 - | 1015 | Vais | 880 | 1u 23 Feh | 53 | 52 | Agra | 84 | 709 | 952 |
| 959 | 60 | $23-$ | 1016 |  | 881 | Mo 14 Mar | 54 | 58 | Paueh | 35 | 710 | 353 |
| *960 | 4061 | $22-$ | 1017 | Bheid | 882 | Fr 2 Mer | 1555 | 6854 | Magh | 36 | 711 | 354 |

General Table of Corresponding Dates


TABLE XVII.-(Oontinued.)
General Table of Corresponding Dates

| A. D | Solam-Year. |  | Lunt-Sonar Yeab |  |  |  | Jupiter-Cyclea, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Intial Day | $\left\{\begin{array}{l} V_{1 k} \\ \text { Samm } \end{array}\right.$ | Intercal Month | $\left\|\begin{array}{l} S_{s k} \\ \text { Sal } \end{array}\right\|$ | Initial Day | 60 Years |  | $\begin{gathered} 12 \\ \text { Years } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 991 | 4082 | 23 Mar | $10 \pm 8$ |  | 913 | Th 19 Mar | 1827 | 8925 | Abwa | 67 | 742 | 38 |
| -992 | 93 | 28 - | 1049 |  | 914 | Ta 8 Mar | 28 | 26 | Kart | 68 | 743 | 86 |
| 293 | 94 | $23-$ | 1050 | Jyoub | 915 | $\mathrm{Sa}_{4} 25 \mathrm{Feb}$ | 29 | 27 | Agra | 69 | 744 | 887 |
| 994 | 95 | 23 - | 1051 |  | 916 | Fr 18 Mar | 30 | 28 | Paush | 70 | 748 | 388 |
| 995 | 96 | $23-$ | 1052 |  | 917 | We 6 Mar | 81 | 29 | Mâgh | 71 | 748 | 88 |
| *996 | 97 | $23-$ | 1053 | Chait | 918 | Mo 24 Feb | 82 | 80 | Phal | 72 | 747 | 0 |
| 997 | 98 | $23-$ | 1054 |  |  | 8a 13 Mar | 83 | 81 | Chart | 79 | 748 | 391 |
| 998 | 99 | $23-$ | 1055 | Briv | 920 | We 2 Mar | 34 | 82 | Vass | 74 | 749 | 92 |
| 999 | 4100 | $23-$ | 1058 |  | 921 | Tu 21 Mar | 85 | 83 | Jyesh | 75 | 750 | 393 |
| *1000 | 4101 | 23- | 1087 |  | 922 | S 10 Max | 36 | 84 | Ashad | 78 | 751 | 394 |
| 1001 | 4102 | 23 Mar | 1058 | Achad | 923 | We 26 Feb | 87 | 85 | Brav | 77 | 752 | 895 |
| 1002 |  | $23-$ | 1089 |  | 924 | We 18 Mar | 88 | 86 | Bhad | 78 | 753 | 396 |
| 1003 | 04 | $23-$ | 1060 |  | 02\% | 57 Mar | 89 | 87 | Aswa | 79 | 754 | 307 |
| ${ }^{*} 100 \pm$ | 06 | 23 - | 1061 | Fais | 926 | Fr 25 Feb | 40 | 88 | Kart | 80 | 755 | 398 |
| 1005 | 06 | $23-$ | 1062 |  | 927 | Th 15 Mar | 41 | 89 | Agra | 81 | 756 | 399 |
| 1008 | 07 | 23 - | 1063 | Bhad | 928 | Mo 4 Mar | 42 | 40 | Paush | 82 | 757 | 00 |
| 1007 | 08 | $23-$ | 1064 |  | 929 | Sa 22 Max | 43 | 41 | Magh | 83 | 758 | 401 |
| ${ }^{*} 1008$ | 09 | $28-$ | 1065 |  | 930 | Th 11 Mar | 44 | 42 | Phal | 84 | 752 | 402 |
| 1009 | $10$ | $23-$ | 1066 | Sriv | 931 | Mo 28 Feb | 48 | 43 | Chait | 85 | 760 | 403 |
| 1010 |  | $23-$ | 1067 |  | 932 | S 19 Mar | 46 | 44. | Vain | 86 | 761 | 404 |
| 1011 | 4112 | 23 Mar | 1088 |  |  |  |  |  | Jyebh | 87 | 762 | 405 |
| *1012 |  | $23-$ | 1069 | Jyesh | 934 | Tu 26 Feb | 48 | 46 | Ashad | 88 | 763 | , |
| 1013 | $14$ | $23-$ | 1070 |  | 935 | Mo 16 Mar | 49 | 47 | Srav | 89 | 764 | 407 |
| 1014 | $15$ | $23-$ | 1071 |  | 936 | Fis 5 Mar | 80 | 48 | Bbad | 90 | 768 | 08 |
| 1015 | $16$ | $23-$ | 1072 | Chast | $93 \%$ | Th 24 Feb | 61 | 49 | Aswa | 91 | 766 | 409 |
| -1016 |  | 28 - | 1073 |  | 938 | Tu 13 Mar | 52 | 50 | Kart | 92 | 767 | 10 |
| 1017 | $18$ | $23-$ | 1074 | gra | 939 | 8a 2 Mar | 58 | 81 | Agra | 93 | 788 | 11 |
| 1018 |  | 23 - | 1075 |  | 940 | Fr 21 Mar | 54 | 52 | Paush | 94 | 769 | 12 |
| 1019 | $20$ | $24-$ | 1076 |  | $941$ | Ta 10 Mar | $55$ |  | Magh | 95 | 770 | 418 |
| ${ }^{*} 1020$ | 4121 | 28 - | 1077 | Ashad | 942 | 828 Feb | $10.58$ | 6954 | Phall | 96 | 771 | 414 |

TABLIE XVII - (Continued)
General Table of Corrcsponding Dates


## TABLE XVII－（Continuod．）

General Table of Correoponding Dates．

| A．D． | Sowar－Year， |  | Lumi－Somab－Year． |  |  |  | Jupiter－CrCles |  |  |  |  | $\begin{aligned} & \text { 娄 } \\ & \text { 震 } \\ & \text { 第 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\|\begin{array}{c} \text { Kali } \\ \text { Yuga } \end{array}\right\|$ | Initial Day． | $\left\|\begin{array}{c} \text { Vir } \\ \text { Bam } \end{array}\right\|$ | Interal Month | $\left\|\begin{array}{l} \text { Sak } \\ \text { Sal } \end{array}\right\|$ | Initial Day | 60 Years． |  | $\begin{gathered} 12 \\ \text { Years } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | 3 Bid | Tel |  |  |  |  |
| 1051 | 4152 | 24 Mer | 1108 |  | 978 | 517 Mar | 1727 | 7025 | Anma | 87 | 802 | 445 |
| －1052 | $\dagger 53$ | 23 － | 1109 |  | 974 | Th 8 Mar | 28 | 26 | Klrt | 28 | 308 | 446 |
| 1053 | 54 | 23 － |  | Chait | 975 | Mo 22 Feb | 29 | 27 | Agra | 29 | 804 | 447 |
| 1064 | 65 | 24 － |  |  | 976 | $\begin{array}{llll}8 & 19 & \mathrm{Mar}\end{array}$ | 30 | 28 | Paush | 80 | 805 | 448 |
| 1058 | 66 | 24 － |  | 85if | 977 | Th 2 Mar | 31 | 29 | Magh | 81 | 806 | 448 |
| －1056 | 57 | 28 － |  |  | 978 | We 20 Mer | 82 | 30 | Phal | 32 | 807 | 450 |
| 1057 | 58 | 23 － |  |  | 979 | 59 Mar | 83 | 81 | Chart | 33 | 808 | 1 |
| 1058 | 59 | 24 － | 1115 | Jyenh | 980 | Fr 27 Feb | 34. | 82 | Vals | 84 | 809 | 452 |
| 1089 | 60 | 24 － |  |  | 981 | Th 18 Mar | 35 | 38 | Jyesh | 85 | 810 | 453 |
| －1060 | 4161 | $28-$ | 1117 |  | 982 | Mo 6 Mar | 36 | 34 | Ashad | 86 | 811 | 154 |
| 1081 | 4162 | 34 Mar | 1118 | Vaid | 983 | Sa 24 Feb | 87 | 85 | Stav | 87 | 812 | 455 |
| 1062 | 68 | 24 － | 1119 |  | 884 | Fr 15 Mar | 88 | 86 | Bhta | 88 | 813 | 450 |
| 1068 | 64 | 24 － | 1120 | Bhad | 985 | Ta 4 Mar | 88 | 87 | Agwa | 89 | 814 | 457 |
| ${ }^{1004}$ | 68 | 23 － | 1121 |  | 986 | Mo 22 Mar | 40 | 88 | Kart | 40 | 815 | 458 |
| 1065 | 66 | 23 － | 1122 |  | 987 | Fr 11 Mar | 41 | 89 | Agta | 41 | 816 | 458 |
| 1068 | 67 | $24-$ | 1123 | Aohed | 988 | We 1 Mar | 42 | 40 | Paush | 42 | 817 | 460 |
| 1067 | 68 | 24 － | 1124 |  | 989 | Mo 19 Mar | 49 | 41 | Magh | 48 | 818 | 461 |
| －1068 | 69 | 23 － | 1125 |  | 890 | Fr 8 Mar | 44 | 42 | Pbal | 44 | 819 | 62 |
| 1069 | 70 | 24 － | 1126 | Jyesh | 891 | Th 25 Feb | 45 | 48 | Chast | 45 | 820 | 63 |
| 1070 | 4171 | 24 － | 1127 |  | 892 | Tu 16 Mar | 46 | 44 |  | 46 | 821 | 64 |
| 1071 | 4172 | 24 Mar | 1128 | Aswa | 998 | 8． 5 Mar | 47 | 45 | Jyeah | 47 | 822 | 465 |
| ＋1072 | 78 | 28 － | 1129 |  | 994 | Fr 28 Mar | 48 | 46 | Achad | 48 | 823 | 466 |
| 1078 | 74 | $24-$ | （1180 |  | 95 | We 18 Mar | 49 | 47 | 8 cov | 49 | 824 | 467 |
| 1074 | 75 | $24-$ | 1181 | Brat | 896 | 82 Mar | 80 | 48 | Bhed | 50 | 825 | 468 |
| 1075 | 78 | 24 | 1182 |  | 897 | 8a 21 Mar | 52 | 49 | －Kart | 61 | 826 | 469 |
| ＊1076 | 77 | 28 － | 1188 |  | 98 | We 9 Mar | 88 | 50 | Agra | 52 | 827 | 470 |
| 1077 | 78 | 24 － | 1184 | Jyeah | 898 | Mo 27 Feb | 54 | 51 | Parah | 68 | 828 | 471 |
| 1078 | 79 | 24 － | 1188 |  | 1000 | S 18 Mat | 85 | 62 | Magh | 54 | 829 | 472 |
| 1079 | 80 | 24 | 1186 |  | 1001 | Th 7 Mar | 56 |  | Phal | 65 | 830 | 478 |
| ＊1080 | 4181 | $23-$ | 1187 | Vala | 1002 | Mo 24 Feb | 1757 | 7054 | Chait | 86 | 831 | 474 |

＋Agrabayana omitwel，and Awina intercalary．

## TABLE EVII.-(Continued.)

General Table of Corresponding Dates

| A. D | Solar-Year |  | Lusi-Solar Year. |  |  |  | Jupiter Cyolma. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kalı <br> Yuga | Initial Day | $\left\|\begin{array}{l} V_{1 k} \\ \operatorname{Sam} \end{array}\right\|$ | Intercal Month | $\left\|\begin{array}{l} \text { Sak } \\ \text { Sal } \end{array}\right\|$ | Initial Day | 80 Yeara |  | $\underset{\text { Yeare }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Te |  |  |  |  |
| 1081 | 4182 | 24 Mar | 1138 |  | 1003 | 3015 Mr | 17 ธ8 | 70 -in | Vals | 57 | 832 | 475 |
| 1082 | 83 | $24-$ | 1139 | Bhàd | $100 \pm$ | Fr 4 Mrr | 59 | 86 | Jyroh | 58 | 883 | 478 |
| 1083 | 84 | 24 | 140 |  | 1005 | We 22 Mar | 60 | 87 | Ashad | 59 | 834 | 477 |
| ${ }^{+1084}$ | 85 | 24 - | 1141 |  | 1008 | Mo 11 Mar | 18 l | 58 | Srâv | 60 | 838 | 478 |
| 2085 | 86 | 24 | 1142 | Ashad | 1007 | Fr 28 Fob | 2 | 59 | Bhâd | n1 | 835 | 478 |
| 1086 | 87 | 24 - | 148 |  | 1003 | Th 19 Mar | 3 | 60 | Aswa | 62 | 837 | 480 |
| 1087 | 88 | 24 - | 44. |  | 1009 | Mo 8 Mar | 4 | 71 | Kart | 53 | 838 | 481 |
| -1088 | 89 | 24 - | 1140 | Jyeeh | 1010 | Sa 26 Feb | 5 | 2 | Agra | 54 | 839 | 482 |
| 1089 | 90 | $24-$ | 1146 |  | 1011 | Fr 16 Mar | 6 | 3 | Paush | 68 | 840 | 488 |
| 1080 | 4191 | 24 | 1147 | Aswa | 1012 | Ta 5 Mar | 7 |  | Magh | 66 | 841 | 484 |
| 1091 | 4192 | 24 Mar | 1148 |  | 1013 | Mo 24 Mar | 8 | 8 | Phal | 67 | 842 | 485 |
| +1092 | 93 | 24 - | 1149 |  | 1014 | Sa 13 Mar | 9 | 6 | Chait | 68 | 843 | 486 |
| 1093 | 94 | 24 - | 1160. | Brav | 101\% | We 2 Mar | 10. | 7 | Vais | 50 | 844 | 487 |
| 1094 | 98 | 24 - | 1151 |  | 1015 | Tu 21 Mar | 11 | 8 | Jyesh | 70 | 845 | 488 |
| 1098 | 96 | 24 - | 1152 |  | 1017 | Sa 10 Mar | 12 | 9 | Ashad | 71 | 846 | 489 |
| -1096 | 97 | 24 - | 1153 | Jyesh | 1018 | Th 28 Feb | 13 | 10 | Srat | 72 | 847 | 490 |
| 1097 | 98 | 24 - | 1154 |  | 1019 | We 18 Mar | 14 | 11 | Bhad | 73 | 848 | 91 |
| 1098 | 99 | 24 - | 58 |  | 1020 | 37 Mar | 15 | 12 | Aswa | 71 | 849 | 92 |
| 1099 | 4200 | 24 - |  | Vals | 1021 | Th 24 Feb | 16 | 3 | Kârt | 78 | 850 |  |
| *1100 | 4201 | 24 - | 1157 |  | 1023 | We 14 Mar | 17 | 14 | Agra | 76 | 851 | 94 |
| 1101 | 4202 | 24 Mar | 1158 | Bhàd | 1023 | 58 Mar | 18 | 15 | Parab | 77 | 850 | 4985 |
| 1102 | 03 | 24 - | 1159 |  | 1024 | S. 22 Mar | 10 |  | Magh | 78 | 858 | 96 |
| 1108 | $04$ | 24 - | 1160 |  | 1025 | Wo 11 Mar | 20 | 17 | Phal | 70 | 86 | 97 |
| -1101 | 05 | 24 - | 1161 | Ashad | 1026 | Mo 29 Feb | 24 | 18. | Chalt | 80 | 5 | 98 |
| 1105 | 06 | 24 - | 1152 |  | 1037 | S 19 Mar | 22 |  | Vair | 81 | 8 | 89 |
| 1106 | 07 | 24 - | 1163 |  | 1028 | Th 8 Mar | 23 | 20 | Jyesh | 82 | 867 | 300 |
| 1107 | 08 | $24-$ | 1161 | Jyerh | 1029 | Mo 26 Feb | 24 | 21 | Aghad | 88 | 858 | 01 |
| *1108 | 09 | 84 - | 55 |  | 1030 | Mo 16 Mar | 28 |  | SrÊp | 84 | 858 | 502 |
| 1109 | 10 | 24 | 1166 | Aswa | 1031 | Fr 6 Mar | 26 |  | Bhâd | 88 | 860 | 503 |
| 1110 | 4211 | 24 | 1167 |  | 1032 | Th 24 Mar | 1827 | 7124 | Abwe | 86 | 861 | 504 |

TABLIE XVII．－（Continued．）
General Table of Corresponding Dates

| AD | Solar Yfar |  | Tunt Solat－Year |  |  |  | Jupitrr－Cycles |  |  |  | 息畐豆 | Haraha Kal． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initial Day | Vik Sam | Intercal Month | $\left\|\begin{array}{l} \text { Snk } \\ \text { Sal } \end{array}\right\|$ | Initial Day | 60 Years |  | $\begin{gathered} 12 \\ \text { Yearm } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | S Sıd | Tel |  |  |  |  |
| 1111 | 4212 | 24 Mar | 1168 |  | 1073 | Mo 13 Mar | 1828 | 7126 | Kart | 87 | 862 | 506 |
| ${ }^{1} 1112$ | 13 | 24 － | 1169 | Srầ | 1034 | We 2 Mar | 29 | 26 | Agra | 88 | 863 | 506 |
| 1118 | 14 | 24 － | 1170 |  | 10\％${ }^{5}$ | Th 20 Mar | 30 | 27 | Paush | 89 | 884 | 507 |
| 1114 | 15 | 24 － | 1171 |  | 1036 | Ta 10 Mar | 31 | 28 | Mî̀gh | 90 | 865 | 508 |
| 1116 | 16 | 24 － | 1172 | Jyesh | 10 tr | $\mathrm{Sa}_{3} 27 \mathrm{Feb}$ | 32 | 29 | Phal | 91 | 866 | 508 |
| ＊1116 | 17 | 24 － | 1173 |  | 1038 | Fr 17 Mnr | 33 | 30 | Chnat | 92 | 867 | 510 |
| 1117 | 18 | 24 － | 1174 |  | 1039 | Tu 6 Mar | 34 | 1 | Vais | 98 | 868 | 511 |
| 1118 | 19 | $24-$ | $11 \%$ | Chatt | 1040 | Sa 23 Feb | 35 | 2 | Jyesh | 94 | 868 | 512 |
| 1119 | 20 | $24-$ | 1176 |  | 1041 | Er 14 Mar | 36 | 3 | Ashad | 95 | 870 | 513 |
| ＊1120 | 4221 | 24 － | 1177 | Bhád | 1042 | We 3 Mar | 37 | 4 | Srà | 98 | 871 | 514 |
| 1121 | 4222 | 24 Mar | 1178 |  | 1043 | Ta 22 Mar | 88 | 6 | Bhâd | 0. | 872 | 615 |
| 1122 | 23 | 24 － | 1179 |  | 1044 | Sa 11 Mar | 39 | 6 | Aswa | 98 | 878 | 816 |
| 1123 | 24 | 24 － | 1180 | Ashad | 1045 | We 28 Feb | 40 | 7 | Kart | 99 | 874 | 617 |
| ＊1124 | 25 | $24-$ | 1181 |  | $1046$ | We 19 Mar | 41 | 8 | Agra | 100 | 878 | 818 |
| 1125 | 26 | $24-$ | 1182 |  | 1047 | S 8 Mar | 42 | 9 | Paugh | 1 | 878 | 510 |
| 1126 | 27 | $24-$ | 1183 | Jyesh | 1048 | Th 25 Feb | 49 | 0 | Magh | 2 | 877 | 620 |
| 1127 | 28 | 24 － | 1184 |  | 1040 | We 16 Mar | 44 | 1 | Phal | 8 | 878 | 521 |
| ＋1128 | 29 | 24 － | 1185 | A8wa | 1050 | Mo 5 Mar | 45 | 2 | Chait | 4 | 879 | 522 |
| 1129 | 80 | 24 － | 1188 |  | 1051 | S 23 Mar | 46 | 3. | Vaia | 5 | 880 | 628 |
| 1180 | 4281 | 24 － | 1187 |  | 1052 | Th 13 Mer |  | 4 | Jyesh | 6 | 881 | 524 |
| 1181 | 4282 | 24 Mar | 1188 | Ashad | 1058 | Mo 2 MEr | 48 | 8 | Ashad | 7 | 882 | 526 |
| －1132 | 83 | 24 － | 1189 |  | 1054 | g 2 Mar | 49 | 6 | Srâv | 8 | 888 |  |
| 1138 | 84 | 24 － | 1190 |  | 1056 | Th 9 Mar | 50 | 7 | Bhad | 9 | 884 | 527 |
| 1134 | 85 | 24 － | 1191 | Jyesh | 1058 | Mo 28 Feb | 61 | 8 | Abwa | 10 | 885 | 528 |
| 1185 | 86 | 25 | 1192 |  | 1057 | Mo 18 Mar |  | 9 | Kırt |  | 886 | 528 |
| ＊1138 | 87 | 24 | 1193 |  | 1058 | Er 6 Msr | 63 | 50 | Agra | 12 | 887 | 80 |
| 1137 | 38 | 24 － | 1194 | Chait | $1059$ | Tu 23 Feb | 54 | 1 | Pauah | 13 | 883 | 81 |
| 1138 | 89 | 24 － | 1195 |  | $1060$ | Th 14 Mar | 56 | 2 | Magh | 14 | 889 | 32 |
| 1139 | 40 | 24 － | 1196 | Srày | 1081 | Fr 3 Mar |  | 8 | Phal | 15 | 890 | 83 |
| ${ }^{*} 1140$ | 4241 | 24 － | ［197 | ． | 1062 | Fr 22 Mar | 1857 | 714 | Chart | 18 | 891 | 634 |

## TABLE XVII．－（Continued．）

General Table of Corresponding Dates

| A．D | Solab－Yyaz |  | Luni Solar－Year |  |  |  | Jupinem－Ctcrits |  |  | $\begin{aligned} & \text { 寻 } \\ & \text { Ä } \\ & \text { 莒 } \\ & \text { 品 } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kali Yuga | Initial Day | Vik Sam | Intercal Month | $\begin{aligned} & \text { Sak } \\ & \text { Sal } \end{aligned}$ | Initial Day | 60 Years |  | $\stackrel{12}{\mathbf{Y e a r s}^{2}}$ |  |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |  |
| 1141 | 4242 | 24 Mar | 1108 |  | 1063 | Ta 13 Mar | 1858 | 7155 | Vals | 17 | 892 | 58 |
| 1142 | 43 | 24 － | 1109 | Ashad | 106t | Ss 28 Feb | 69 |  | Jyent | 18 | 893 | 538 |
| 1148 | 44 | 25 － | 1200 |  | 1065 | Fr 19 Mar | 60 | 67. | Ashad | 19 | 894 | 637 |
| ＊1144 | 45 | 24 － | 1201 |  | 1066 | We 8 Mar | 193 | 58 | Srav | 20 | 895 | 638 |
| 1145 | 46 | 24 － | 1.32 | Vals | 1067 | S $2 \therefore \mathrm{Feb}$ |  | 59 | Phad | 21 | 896 | 39 |
| 1146 | 47 | 25 － | 1203 |  | 1068 | Sa it Mar |  | 60 | Aswa | 22 | 897 | 40 |
| 1147 | 48 | 25 － | 120 ！ | Bhad | 1069 | We 5 Mar |  | 721 | Kait | 23 | 898 | 11 |
| －1148 | 49 | 24 － | 1205 |  | 1070 | Tu 23 Mar | $b$ | 2 | Agra | 24 | 899 | $\pm 2$ |
| 1149 | 50 | 24 － | 12 |  | 1071 | Sa 12 Mar | 6 |  | Paush | 25 | 000 | 519 |
| 1150 | 4251 | 24 － | 1207 | Ashad | 1072 | We 1 Mar | 7 |  | Mugh | 20 | 901 | 54 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1151 | 4252 | 25 Max | 1208 |  | 1079 | We 21 Mar | 8 | 3 | Phal | 27 | 902 | 545 |
| ＊1152 | 53 | 24 － | 1209 |  | 1074 | S 9 Mr | 9 | 6 | Chait | 28 | 903 | 516 |
| 1153 | 84 | 24 － | 1210 | Jyeeb |  | Th 20 Feb | 10 |  | Vats | 23 | 904 | 517 |
| 1154 | 65 | 24 － | 1271 |  |  | We 17 Mar | 1 | 8 | Jyeah | 30 | 90. | 548 |
| 1155 | 56 | $25-$ | 1212 |  | 1077 | Mo 7 Mar | 12 | 9 | Ashad | 11 | 906 | 510 |
|  |  | $24-$ |  |  | 1078 | Fr 24 Feb |  | 10 | Brà | 32 | 007 | 50） |
| ${ }^{1156}$ | 57 | $24-$ | 1218 | Chalt | 1078 | $\begin{array}{llll}\mathrm{Fr} & 24 & \mathrm{Feb} \\ \mathrm{Tb} & 14 & \mathrm{ar}\end{array}$ | 13 | 11 | Bhûd | 33 | 908 | 531 |
| 1157 | 58 | 24 － | 1214 |  | 1079 | Th 14 Mr | 14 | 11 | Brua | 34 |  | 552 |
| 1168 |  | 24 － | 1215 | 81.8 | 1080 | Mo 3 Mar |  | 12 | Absa Kärt | 34 35 |  | 52 |
| 1100 | 60 | $25-$ | 1216 |  | 1081 | $\mathrm{B} \quad 22 \mathrm{Mar}$ | 16 | 17 | Kärt | 35 | 910 | 53 |
| ＊1160 | 4261 | 24 － | 1217 |  | 1082 | Fr 11 Mar |  |  | －Paush | 96 | 911 | 4 |
| 1161 | 4262 |  |  | Abbad | 1085 | Tu 28 Feb | 19 | 15 | Magh | 37 | 912 | 565 |
| 1162 |  | $25-$ | 1219 |  | 1084 | Mo 10 Mar | 20 | 16 | Phal | 38 | 919 | 566 |
| 1163 |  | $25-$ | 1220 |  | 1085 | Pr 8 Mar | 21 | 17 | Chat | 39 | 914 | 557 |
| ${ }^{11164}$ | 65 | 24 － | 1221 | Vaıs | 1086 | We 26 Feb | 22 | 18 | Vals | 40 | 915 | 5ã8 |
| 1165 |  | 24 － | 1222 |  | 1087 | Mo 15 Mar | 23 | 19 | Jyesh | 41 | 916 | 559 |
| 1166 | 67 | $25-$ | 1229 | Bhadd | 1088 | Sa 5 MLar | 24 | 20 | Ashad | 12 | ${ }^{917}$ | 0 |
| 1167 | 68 | $25-$ | 1224 |  | 1089. | Fr 24 Mat | 2 B | 21 | Srav | 43 | 918 | 661 |
| ${ }^{* 1168}$ | 69 | 24 － | 1225 |  | 1090 | Tu 12 Mar | 26 | 22 | Bhad | 44 | 919 | 562 |
| 1169 | 70 | 24 | 1226 | 8 CH | 1001 | Sa 1 Mar | 27 | 23 | Aswa |  | 20 | 568 |
| 1170 | 4271 | 25 － | 1227 |  | 1008 | Sa 21 Mar | 1028 | 7224 | Kirt | 46 | 921 | 564 |

TABLTR XVII．－（Continued．）
General Table of Corresponding Dates．

| A D | Solar Year |  | Luni－Solar－Year |  |  |  | Jupiter Cyoles |  |  | $\begin{aligned} & \text { 畐 } \\ & \text { 品 } \\ & \text { 宽 } \\ & \infty \end{aligned}$ | $\begin{aligned} & \text { 易 } \\ & \text { 豆 } \\ & \text { 雨 } \end{aligned}$ | 或 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kalı } \\ \text { Yuga } \end{gathered}$ | Initial Day | $\left\|\begin{array}{c} \text { Vık } \\ \text { Sam } \end{array}\right\|$ | Intercal Month | $\begin{array}{\|l\|} \hline \mathrm{Sak} \\ \mathrm{Sal} \\ \hline \end{array}$ | Inital Day | 60 Years |  | $\underset{Y_{\text {earb }}}{12}$ |  |  |  |
|  |  |  |  |  |  |  | S Sxd | Te1 |  |  |  |  |
| 1171 | 4272 | 25 Mar | 1228 |  | 1093 | We 10 Mar | 1829 | 7225 | Agra | 47 | 922 |  |
| ＊1172 | 73 | 24 － | 1229 | Jyeah | 1094 | $5 \quad 27 \mathrm{Feb}$ | 30 | 26. | Paush | 48 | 923 |  |
| 1173 | 74 | 24 － | 1290 |  | 1095 | Sa 17 Mar | 31 | 27 | Magh | 49 | 924 |  |
| 1174 | 75 | $25-$ | 1231 |  | 1096 | Th 7 Mar | 32 | 28 | Phal | 50 | 925 | 5 |
| 1175 | 75 | $25-$ | 1232 | Chait | 1097 | Mo 2t Fob | 33 | 29 | Chatt | E1 | 926 |  |
| ＊1176 | 77 | $24-$ | 1233 |  | 1098 | Sn 13 Mar | 34 | 30 | Yas | 52 | 927 | 570 |
| 1177 | 78 | 24 － | 1234 | Srav | 1039 | We 2 Mar | 85 | 31 | Jyesh | 63 | 928 | 571 |
| 1178 | 79 | 25 － | 1235 |  | 1100 | We 22 Mar | 36 | 32 | Ashed | 54 | 920 | 572 |
| 1179 | 80 | $25-$ | 1296 |  | 1101 | S 11 Mar | 37 | 33 | Srâv | 56 | 930 | 573 |
| ${ }^{1180}$ | 4281 | $24-$ | 1237 | Ashad | 1108 | Th 28 Feb | 38 | 84 | Bhad | 56 | 931 | 574 |
| 1181 | 4282 | 24 Mar | 1238 |  | 1103 | We 18 Mar | 89 | 85 | Aswa | 57 | 932 | 575 |
| 1182 | 83 | $25-$ | 1239 |  | 1104 | Mo 8 Mar | 40 | 88 | Kart | 58 | 938 | 576 |
| 1183 | 84 | $25-$ | 1240 | Vals | 1105 | Fr 25 Feb | 41 | 37 | Agra | 59 | 934 | 77 |
| ＊1184 | 85 | $24-$ | 1241 |  | 1105 | Th 15 Mar | 42 | 38 | Panab | 60 | 935 | 678 |
| 1185 | 86 | 24 － | 1242 | Bhad | 1107 | Mo 4 Mar | 43 | 39 | Màgh | 61 | 938 | 79 |
| 1188 | 87 | 25 | 1243 |  | 1103 | Mo 24 Mar | 44 | 40 | Phal | 62 | 937 | 80 |
| 1187 | 88 | $25-$ | 1244 |  | 1109 | Fr 13 Mar | 45 | 41 | Chart | 53 | 938 | 581 |
| ＊1188 | 89 | 24 － | 1245 | Srav | 1110 | Tu 1 Mar | 46 | 42 | Vais | 64 | 939 | 582 |
| 1189 | 90 | 24 － | 12461 |  | 1111 | Mo 20 Mar | 47 | 43 | Jyeah | 65 | 940 |  |
| 1190 | 4291 | $25-$ | 1247 |  | 1112 | Sa 10 Mar | 48 | 44 | Ashad | 65 | 941 | 584 |
| 1191 | 4292 | 25 Mar | 1248 | Jyesh | 1119 | We 27 Feb | 49 | 45 | Srêv | 87 | 942 | 58 |
| ＊1192 | 93 | 24 － | 1249 |  | 1114 | Mo 16 Mar | 60 | 45 | Bhad | 68 | 943 | 686 |
| 1193 | 91 | 25 | 50 | $\dagger$ | 1115 | Sb 6 Mar | 51 | 47 | Abwa | 59 | 944 | 587 |
| 1194 | 95 | $25-$ | 1251 | Chait | 1116 | We 23 Feb | 52 | 48 | Kârt | 70 | 94 | 888 |
| 1195 | 95 | 25 | 1203 |  | 1117 | Ta 14 Mar | 53 | 49 | Agra | 71 | 946 | 88 |
| ${ }^{1} 1196$ | $97$ | 24 － | 1253 | Brav |  | Sb 2 Mbr | 54 | 50 | Paush | 72 | 947 |  |
| 1197 | 98 | 25 | 1254 |  | 1119 | Sa 22 Mar | 55 | 51 | Magh | 78 | 948 |  |
| 1198 | 99 | $25-$ | 1255 |  |  | We 11 Mar |  | 62 | Phal | 74 | 949 | 592 |
| 1199 | 300 | $25-$ | 1256 | Jyesh | 1121 | 8 28 Feb |  | 53 | Chait | 75 | 950 | 893 |
| ${ }^{*} 1200$ | 4801 | 24 － | 1257 |  | 1122 | Sa 18 Mar | 1958 | 7254 | Vais | 76 | 951 | 594 |

\＄Agrehayana owitted，and Anwina intarcelary．

TABLE XVII -(Continued)
General Tuble of Cor responding Dates


TABLE XVII.-(Continued.)
General Table of Corresponding Dates

| A D |  | g-Ykía | LUNI-SOLAR-YEAR |  |  |  | Jupiter-Cyclas |  |  |  | $\begin{aligned} & \text { 砲 } \\ & \text { 㤩 } \\ & \text { B } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\left\{\begin{array}{l} V_{1 k} \\ \text { Sam } \end{array}\right.$ | Intercal Month | $\left\lvert\, \begin{aligned} & S_{\text {alk }} \\ & \mathrm{Sal}_{\mathrm{al}} \end{aligned}\right.$ | Initial Day | 60 Yeare |  | $\frac{12}{\text { Years }}$ |  |  |  |
|  |  |  |  |  |  |  | Sid | Tel |  |  |  |  |
| 1231 | 4332 | 25 Mar | 1288 | Авта | 1169 | Th 6 Mar | 2029 | 325 | Agra | 7 | 982 | 620 |
| -1232 | 3 ) | 25- | 1289 |  | 1154 | Th 25 Mar | 90 | 26 | Paush | 8 | 983 | 26 |
| 1233 | 31 | 25- | 1200 |  | 1135 | Mo 14 Mar | 81 | 27 | Magh | 9 | 98. | 627 |
| 12.34 | 3 ; | 25 | 1291 | Sriv | 1156 | Fr 3 Mrr | 93 | 28 | Pb 61 | 10 | 935 | 28 |
| 1235 | 36 | 25 | 1292 |  | 1157 | Th 22 Mar | 33 | 29 | Chait | 11 | 986 | 629 |
| *1236 | 37 | 25 | 1293 |  | 1158 | Tu 11 Mar | 34 | 30 | Vas | 12 | 087 | 0 |
| 1237 | 88 | $25-$ | 129* | Jyesh | 1159 | Sa 28 Feb | 33 | 81 | Jyesh | 13 | 988 | 631 |
| 1278 | 30. | 23 | 1295 |  | 1160 | Mo 19 Mar | 36 | 32 | Ashad | 14 | 989 | 32 |
| 1239 | 40 | 20 | 1296 |  | 1161 | Tu 8 Mar | 37 | 33 | Srav | 18 | 990 | 38 |
| * 1240 | 4341 | 25 | 1297 | Ve1s | 1162 | S 26 Feb | 38 | 34 | Bhad | 16 | 991 | 634 |
| 1241 | 4342 | 2s Mar | 1208 |  | 1169 | Fr 15 Ma | 39 | 83 | Asw | 17 | 992 | 696 |
| 1252 | 43 | 25 | 1209 | Bhâd | 1164 | Tu 4 Mar | 40 | 86 | K4rt | 18 | 093 | 86 |
| 1243 | 44 | 25 | 1300 |  | 1165 | Mo 23 Mar | 41 | 37 | Agra | 19 | 994 | 637 |
| *1244 | 45 | $23-$ | 1301 |  | 1166 | Sa 12 Mar | 42 | 38 | Paush | 20 | 99** | 8 |
| 1245 | 46 | $25-$ | 1302 | Ashad | 1167 | We 1 Mar | 44 | 39 | - Phat | 21 | 936 | 89 |
| 1246 | 47 | $25-$ | 1303 |  | 1168 | Tu 20 Mar |  | 40 | Chat | 22 | 997 | 10 |
| 1247 |  | $25-$ | 13 |  | 1169 | Sa 9 Mar |  | 41 | Vaio | 23 | 908 | 641 |
| *1243 | 49 | $25-$ | 1305 | Jyeeh | 1170 | We 26 Feb | 47 | 42 | Jyesh | $2 \pm$ | 099 | 2 |
| 1249 | 50 | 25 | 1306 |  | 1171 | We 17 Feb | 48 | 43 | Ashad | 25 | 1000 | 8 |
| 1280 | 4351 | $25-$ | 1307 | Aswe | 1172 | S 6 Mar |  | 44 | Srav |  | 1001 | 614 |
| 1251 | 4352 | 26 Mar | 1308 |  | 1177 | Sa 2\% Mar | 50 | 45 | Bhåd | 27 | 1002 | 645 |
| *1232 | 53 | 25 | 1309 |  | 1174 | Th 14 | 51 | 46 | 8ws | 23 | 003 |  |
| 1253 |  | $25-$ | 1310 | Srav | 1175 | Mo 3 Mgr | 52 | 47 | Kart | 29 | 100t |  |
| 1254 |  | $26-$ | 1311 |  |  | S 22 Feb | 53 | 48 | Agra | 30 | 005 |  |
| 1255 |  | 26 - | 1312 |  | 1177 | Th 11 Mar | 54 | 49 | Paush | 31 | 1000 |  |
| * 1256 | 57 | $25-$ | 1313 | Jyesh | 1178 | Mo 23 Feb | 55 | 50 | Mâgh | 32 | 1007 | 650 |
| 1257 | 58 | $25-$ | 1314 |  | 1178 | 813 Mar | 56 | 51 | Phel | 88 | 1003 |  |
| 1258 | 59 |  |  |  |  | Th 7 Mar | 57 | $52$ |  | 84 |  | 2 |
| 1259 | 60 | 26 - | 1316 | Ohalt | 1181 | Tu 25 Feb | 58 | 58 | Vaia | 30 | 1010 | 3 |
| ${ }^{+1200}$ | 4361 | $25-$ |  | .. | 1182 | Mo 15 Mar | 20597 | 7354 | Jyesh | 36 | 1011 | 54 |

TABLE XVIr.-(Continued.)
Gencral T'uble of Comesponding Dates


TABLㅍ XVII.-(Continued.)
General Table of Corvespondung Dates


TABL표 XVII.-(Continued)
General Table of Corresponding Dates


## TABLIE XVII.-(Continued.)

General Table of Corresponding Dates.

| A D | Solat Year |  | Luni golamerene. |  |  |  | Jupitee-OTOLES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Knll } \\ \text { Yage } \end{gathered}$ | $\begin{gathered} \text { Inltisl } \\ \text { Day } \end{gathered}$ | $\left\lvert\, \begin{aligned} & \text { Vik } \\ & \text { Bam } \end{aligned}\right.$ | Intercal Month | $\left\|\begin{array}{l} \text { Sek } \\ \text { Sal } \end{array}\right\|$ | Initial Dej | 60 Yeara |  | $\stackrel{12}{\text { Yearw }}$ |  |  |
|  |  |  |  |  |  |  | 8 Sid | Tel |  |  |  |
| 1851 | 4452 | 26 Mar | 1408 | Vain | 1273 | A 27 Feb | 2281 | 7525 | Magh | 27 | 1102 |
| *1853 | 53 | $20-1$ |  |  | 1274 | S 18 Mar | 82 | 26 | Phal |  | 108 |
| 1853 | 54 | $20-1$ |  | Bhid | 1275 | Th 7 Mar | 88 | 27 | Chat |  | 1104 |
| 1854 | 55 | $20-1$ | 1411 | ... | 1276 | We 26 Mar | 34 | 28 | Vais |  | 1105 |
| 1855 | 56 | $20-1$ |  |  | 1277 | S 15 Mar | 35. | 29 | Jyesh |  | 1108 |
| *1356 | 57 | $26-1$ | 1413 | Azat | 1273 | Fr 4 Mar | 96 | 80 | Ashad |  | 1107 |
| 1957 | 88 | $26-1$ | 1414 | ... | 1278 | Th 23 Mar | 37 | 81 | Bray |  | 1108 |
| 1858 | 59 | 26 -- | 1415 |  | 1280 | Mo 12 Mar | 38 | 82 | Bhid |  | 1109 |
| 1859 | 60 | 26-1 | 1416 | Jyash | 1281 | Fr 1 Mar | 39 | 84 | Aswa |  | 110 |
| ${ }^{-1860}$ | 4461 | 26 ... | 1417 | ... | 1232 | Th 20 Mar | 40 | 34 | Kart |  | 1111 |
| 1861 | 4462. | 2, Mar | 1418 |  | 1288 | Tu 9 Mar | 41 | 85 | Agra |  | 112 |
| 1302 | 63 | 20 - | $1+18$ | Vals | 1284 | 8s 26 Feb | 42 | 80 | Paush |  | 1113 |
| 1303 | 64 | 27 - | 1420 |  | 1288 | Fr 17 Mar | 48 | 87 | Magh |  | 1114 |
| *1864 | 68 | 26 - | 1421 | Bhad | 1288 | Tu 5 Mar | 44 | 88 | Phál |  | 1118 |
| 1505 | 66 | 26 - | $1+22$ |  | 1237 | Mo 24 Mar | 45 | 39 | Chart |  | 116 |
| 1966 | 67 | 26 - | 1423 |  | 1238 | Fr 13 Mar | 46 | 40 | Vu2e |  | 1117 |
| 1367 | 68 | 26 - | 1424 | Ashed | 1289 | Tu 2 Mar | 47 | 41 | Jyeah |  | 118 |
| * 1368 | 69 | 26 - | 1420) |  | 1290 | Iu 21 Mar | 48 | 42 | Ashad |  | 119 |
| 1369 | 70 | 26 - | 1426 |  | 1291 | Sa 10 Ma | 48 | 43 | Stay |  | 120 |
| 1370 | 4471 | 26 - | 1427 | Vals | 1292 | We 27 Feb | 50. | $4{ }^{4}$ | Blatid |  | 1121 |
| 1371 | 4472 | 27 Mar | 1428 |  | 1294 | We 19 Mar | 61 | 45 | Aswa |  | 1122 |
| *1972 | 73 | 26 - | 1429 | Bhad | 1204 | S 7 Mar | 53 | 46 | Kait |  | 129 |
| 1374 | 74 | 26 - | $1+380$ |  | 1295 | Sa 26 Mar | t3 | 47 | Agia |  | 1124 |
| 1374 | 75 | 26 - | 1411 |  | 1296 | We lis Mar | tis | 48 | Paugh |  | 125 |
| 1375 | 76 | 27 - | $1+32$ | Sait | 1297 | S 4 Mur | 68 | 49 | Magh |  | 126 |
| +1370 | 77 | 26 - | 1433 |  | 1298 | Ss 22 Mar | 351 | 80 | Phàl |  | 127 |
| 1377 | 78 | 26 - | $148 t$ |  | 1299 | We 11 Mar | 57 | 61 | Chat |  | 128 |
| 1378 | 79 | 26 | 1430 | Jyesh | 1300 | Ma 1 Mar | 58 | 62 | V018 |  | 128 |
| 1379 | 80 | 72 | 1430 |  | 1301 | 820 Mar | 30 | 63 | Jyesh |  | 1180 |
| *1980 | 4481 | 26 - | 1437 | $\dagger$ | 1302 | Th 8'Mar | 2260 | 7554 | Ashad | 5 | 1191 |

t hartike ountesd, nod Keruka intercalary

TABLE XVII.-(Continued.)
General Table of Cor responding Dates

| A.D | Solar-Year |  | Luni-Solar Feak |  |  |  | Jupiren-Cyoles |  |  | 荲 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kall } \\ \text { Yuga } \end{gathered}$ | Initial Day | $\left\|\begin{array}{l} \bar{F}_{1 k} \\ \text { Sam } \end{array}\right\|$ | Intercal Ilonth | $\left\|\begin{array}{l} \mathrm{Sakr}^{\mathrm{Sal}} \end{array}\right\|$ | Initial Day | 60 Yenrs |  | $\underset{\text { Years }}{12}$ |  |  |
|  |  |  |  |  |  |  | S Std | Tel |  |  |  |
| 1881 | 4482 | 26 Mar | 1488 | Vais | 1303 | Mo 25 Feb | 201 | 75 55 | Srậ |  | 1132 |
| 1882 | 89 | 26- | 14.39 |  | 1304 | $\mathrm{S} \quad 16 \mathrm{Mar}$ | 2 | ถ0 | Hhatd |  | 1183 |
| 1889 | 84 | $26-$ | 1440 | Bhadd | 1305 | Th 5 Mar | 3 | 5 | Aswa |  | 1194 |
| -1884 | 88 | $28-$ | 1441 |  | 1306 | Th 2t Mar | 4 | 68 | Kirt |  | 1188 |
| 1985 | 88 | $28-$ | 1442 |  | 1307 | Mo 13 Mar | 5 | 59 | Agra |  | 1136 |
| 1886 | 87 | $26-$ | 1448 | Ashad | 1308 | Fr 2 Mar |  | 60 | Paush |  | 1197 |
| 1887 | 88 | $27-$ | 1444 |  | 1303) | Fr 22 Mar |  | 761 | Magh |  | 1198 |
| *1388 | 89 | 26 - | 1445 |  | 1310 | Ta 10 Mar |  | 2 | Phal |  | 1839 |
| 1389 | 90 | 28 - | 1446 | Jyesh | 1311 | Sa 27 Feb | 0 | 8 | Chat |  | 1140 |
| 1390 | 4491 | 26 - | 1445 |  | 1812 | Mo 18 Mar | 10 | 4 | Y01s |  | 1141 |
| 1391 | 4492 | 27 Mar | 1448 | Bhâd | 1318 | Tu 7 Mar | 11 | $B$ | Jyenh |  | 1142 |
| ${ }^{1} 1392$ | 93 | $26-$ | 1448 |  | 1314 | Mo 25 Mar | 12 | 6 | Abhad |  | 1143 |
| 1398 | 94 | $26-$ | 1450 | - | 1915 | Fr 14 Mar | 19 | 7 | Srêr |  | 1144 |
| 1894 | 95 | 28 - | 1451 | Srêt | 1318 | Ta 3 Mar | 14 | 8 | Bhed |  | 1148 |
| 1395 | 96 | $26-$ | 1459 |  | 1317 | Mo 22 Mar | 15 | 9 | A8wa |  | 1146 |
| *1396 | 97 | $26-$ | 1453 |  | 1318 | Sz 11 Mar | 10 | 10 | Kart |  | 1147 |
| 1397 | 98 | $26 \sim$ | 1454, | Jyeah | 1319 | We 28 Feb | 17. | 11 | Agra |  | 1148 |
| 1398 | 98 | 28 - | 1455 |  | 1320 | Ta 19 Mar | 18 | 12 | Paush |  | 1149 |
| 1899 | 4500 | 27 - | 1458 | $\dagger$ | 1321 | Sa 8 Mar | 19 | 18 | Mágh |  | 1160 |
| ${ }^{1} 1400$ | 4801 | 26 - | 1457 | Chait | 1322 | Th 28 Feb | 20 | 14 | Phil | 78 | 1151 |
| 1401 | 4502 | 26 Mar | 1458 | - | 1329 | We 16 Mar | 21 | 15 | Chatt | 77 | 1152 |
| 1402 | 08 | 27 - | 1459 | Bhad | $132+$ | Mo 6 Mar | 22 | 16 | Vain |  | 1183 |
| 1408 | 04 | $27-$ | 1460 |  | 1325 | S 28 Mar | 29 | 17 | Jyeah |  | 1154 |
| ${ }^{1} 1404$ | 05 | 26 - | 1461 |  | 1326 | Th 19 Mar | 24 | 18 | Ashad |  | (1158 |
| 1405 | 08 | 28 - | 1462 | Ashad | 1327 | Mo 2 Mar | 28 | 19 | Srâr |  | 1156 |
| 1408 | 07 | 27 - | 1463 |  | 1328 | Mo 22 Mar | 26 | 20 | Bhad |  | 21157 |
| 1407 | 08 | 27 - | 1464 |  | 1829 | Fr 11 Mar | 27 | 21 | Aswa |  | 1168 |
| ${ }^{1} 1408$ | 09 | 28 - | 1485 | Vais | 1380 | Ta 28 Feb | 28 | 22 | Kârt |  | 1189 |
| 1409 | 10 | $28-$ | 1486 |  | 1331 | S 17 Mar | 29 | 23 | Agra |  | 81160 |
| 1410 | 4511 | 27 - | 1467 | Bhed | 1352 | Fr 7 Mar | 8380 | 7624 | Pagah |  | 61161 |

$\dagger$ Aurahuyana omitted, and Kartuka interoshary.

## TABLF XVII.-(Continued.)

General Tuble of Corresponding Dates

| $\Delta \mathrm{D}$ | Solar Yeall |  | Lumi Solab Year |  |  |  | Jupitera-Cycles |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\{\begin{array}{l} \text { Kalalı }_{2} \\ \text { Yuga } \end{array}\right.$ | Inital Day | $\begin{gathered} V_{1 k} \\ \text { Sum } \end{gathered}$ | Intercal Month | Sak <br> Sal | Initial Day | 60 Years |  | $\underset{\text { Years }}{12}$ |  |  |
|  |  |  |  |  |  |  | $s$ Sid | Tel |  |  |  |
| 1411 | 4512 | 27 Mar | 1168 |  | 1333 | Th | 23 | 7825 | Magh |  | 2 |
| * 1412 |  | 26 - | 1469 |  | 1331 | Mo li Mar | 32 | 20 | Phál |  | 1163 |
| $1+13$ | 14 | 26 - | 1470 | Ashad |  |  |  | 27 |  |  |  |
| 213 | 14 | 27 - | 1470 | Ashad | 1353 | Fr 3 Mat | 33 | 27 | Chait |  | 61 |
| 1414 | 15 | $27-$ | $1+71$ |  | 1376 | Fr 23 Mar | 31 | 28 | Vals |  | 1165 |
| 1415 | 16 | $27-$ | 1472 |  | 1337 | Tu 12 Mar | 3b | 29 | - Abliad |  | 1160 |
| -1416 | 17 | 26 - | 1473 | Jjesh | 1338 | Sa 29 Feb | 37 | 30 | Slav |  | 1107 |
| 1417 | 18 | $20-$ | 1774 |  | 1339 | Fr 19 Ma | 36 | 31 | Bhad |  | 1168 |
| 1418 | 14 | $27-$ | 1475 | Eert | 1740 | We 9 Mar | 39 | 32 | Aswa |  | 1169 |
| 1419 | 20 | $27-$ | 1470 |  | $13+1$ | Mo 27 Mar | 10 | 33 | Kart |  | 1170 |
| * 1420 | 4521 | $26-$ | 1478 |  | 1842 | Sa 16 Mar | 41 | 34 | Agra |  | 1171 |
| 1421 | 4522 | 26 Mar | 1478 | Slaty | 1313 | We $s$ Mar | 42 | 35 | Paurh |  | 1172 |
| 1422 | 23 | 27 - | 1473 |  | 1341 | Tu 24 Mat | 43 | 36 | Magh |  | 1179 |
| 1123 | 24 | 27 - | 1480 |  | $134{ }^{\circ}$ | Sa 13 Mar | 44 | 33 | Plal |  | 117t |
| *1424 | 25 | 26 - | 1481 | Ashad | 1346 | Th 2 Mar | 4.5 | 88 | Chart |  | 175 |
| 1225 | 26 | 27 - | 1182 |  | 1317 | We 21 Mar | 46 | 39 | Vals |  | 1176 |
| 1426 | 27 | 27 - | 1483 |  | $13+8$ | $\mathrm{S} \quad 10 \mathrm{Mar}$ | 47 | 40 | Jyesh |  | 1177 |
| 1427 | 28 | 27 - | 1484 | Vais | 1349 | Th 27 Feb | 48 | 41 | Ashad |  | 178 |
| -1428 | 29 | 26 | 1480 |  | 1350 | We 17 Mat | 49 | 42 | Sráv |  | 1179 |
| 1129 | 30 | 27 - | 1486 | BLad | 1351 | 310 | 50 | 43. | Bhad |  | 8 |
| 1430 | 4581 | 27 | 1487 |  | 1352 | S 26 Mar | 51 | 44 | Aswa |  | 1181 |
| 1431 | 4532 | 27 Max | 2488 |  | 1353 | Th 15 Mar | 52 | 45 | Kart |  | 1182 |
| *1432 | 33 | 20 - | 1489 | Ashad | 13.4 | Mo 3 Mar | 53 | 46 | Agra |  | 1188 |
| 1433 | 34 | 27 - | 1490 |  | 1853 | Mo 29 Mar | 51 | 47 | Paush |  | 1184 |
| 1434 | 35 | $27-$ | 1491 |  | 1356 | Fr 12 Mar | 65 | 48 | Megh |  | 183 |
| 1435 | 36 | $27-$ | 1492 | Jjesh | 1857 | Tu 1 Mar | 66 | 40 | Pucl |  | 86 |
| ${ }^{1} 1436$ | 37 | $20^{-}$ | 1493 |  | 1358 | गro 10 Mar | 57 | 60 | Chat |  | 187 |
| 1437 | 38 | $27-$ |  | Kart | 1358 | Sa 9 Mar | 88 | 81 | Yais |  | 188 |
| 2438 | 89 | 27 - | 1495 |  | 1360 | Th 27 Mar | 60 | 82 | Jyeeh | 14 | 189 |
| 1439 | 40 | $27-$ | 1396 |  | 1361 | Mo 16 Max | 2360 | 57 | Ashad |  | 1190 |
| * 1440 | 4511 | 26 - | 1497 | 8ray | 1362 | Sa 5 Mar | 241 | 7684 | Srêt |  | 1191 |

## TABLE XVII.-(Continaed.)

General Table of Corresponding Dates


TABLIH XVII.-(Continued.)
General Table of Corresponding Dates

| 4 D | Solaz-Yent |  | Luntmotar-Yeas |  |  |  | Juptren-CTCLIE |  |  |  | $\begin{aligned} & \text { 岳 } \\ & \text { 㤩 } \\ & \mathbf{8} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kall Yuge | Intial Day | $\begin{aligned} & \text { Vik } \\ & \text { Sam } \end{aligned}$ | Intercal Month |  | Initial Day | 60 Feers. |  | $\begin{gathered} 12 \\ \text { Yoarsin }^{2} \end{gathered}$ |  |  |
|  |  |  |  |  |  |  | 3. 31 d | Tel. |  |  |  |
| 1471 | 4572 | 27 Mar | 1528 |  | 1393 | Fr 22 Mar | 2432 | 7725 | Phal |  | 1222 |
| ${ }^{*} 1472$ | 73 | 27 - | 1629 |  | 1394 | We 11 Mar | 93 | 25 | Chatt | 48 | 1228 |
| 1473 | 74 | 27 - | 1530 | Jyerh | 1895 | S 28 Feb | 34 | 27 | Yais |  | 1224 |
| 1474 | 70 | 27 - | 1591 |  | 1896 | Ss 19 Mar | 35 | 28 | Jyeah |  | 1225 |
| 1475 | 75 | 27 - | 1532 | Aswa | 1397 | We 8 Mar | 35 | 29 | Ashad |  | 1226 |
| *1476 | 77 |  | 153s, |  | 1398 | We 27 Mar | 37 | 30 | Srav |  | 1227 |
| 1477 | $78^{\circ}$ |  | 1584 |  | 1399 | 516 Mar | 38 | 81 | Bhad |  | 1228 |
| 2478 | 79 | $27-$ | 1535 | Srà | 1400 | Th 5 Mar | $30^{2}$ | \$2 | Aswn |  | 1220 |
| 1479 | 80 | 27 - | 1030] |  | 1401 | We 24 Mar | $40^{\prime}$ | 38 | Kirt |  | 1280 |
| ${ }^{1} 1480$ | 4581 | 27 - | 1537 |  | 1102 | Mo 13 Mar | 41 | 34 | Agra |  | 1231 |
| 1481 | 4582 | 27 Mar | 1538 | Ashad | 1403 | Er 2 Mar | 42 | 85 | Paush |  | 1232 |
| 1482 | 89 | 27 - | 1539 |  | 1404 | Th 21 Mar | 43 | 86 | Màgh |  | 1233 |
| 1483 | 84 | 28 - | 1540 |  | 1405 | Tu 11 Ma | 44 | 37 | Phal |  | 1234 |
| *1484 | 85 | 27 - | $154]$ | Chant | 1400 | 8s 28 Teb | $40^{\circ}$ | 88 | Chatt |  | 1235 |
| 1485 | 86 | 27 - | 1542 |  | 1 107 | Th 17 Mar | 46 | 39 | Vals |  | 1236 |
| 1486 | 87 | 27 - | 1543 | Srav | 1408 | Tu 7 3a | 47 , | 40 | Jyeah |  | 1287 |
| 1487 | 88 | 28 - | 154t] |  | 1403 | Mo 26 Mar | 48. | 41 | Ashad |  | 1238 |
| *1488 | 89 | 27 - | 1040] |  | 1410 | Fr 14 Mar | 49 | 42 | Sray |  | 1289 |
| 1489 | 90 | 27 - | 1594 | Ashad | 1411 | Ta 3 Mar | 50 | 43 | Bhàd |  | 1240 |
| 1490 | 4591 | 27 - | 1547 |  | 1412 | Mo 22 Mar | 81 | 44 | Abwa | 66 | 1241 |
| 1491 | 4592 | 28 Mar | 1548 |  | 1418 | 8. 12 Mar | 52 | 45 | Kirt |  | 1848 |
| *1492 | 98 | 27 - | 1549 | Vais | 1414 | We 2' Feb | 53 | 45 | Agra |  | 1248 |
| 1493 | 04 | 27 | 1550 |  | 1415 | Tu 19 Mar | 64 | 47 | Paush |  | 1244 |
| 1404 | 98 | 28 | 1551 | Bhal | $1+10$ | \& 9 Mar | 65 | 48 | Magh | 70 | 1245 |
| 1495 | 96 | 28 - | 1482 |  | 1417 | Fr 27 Mar | 66 | 48 | Phal |  | 1246 |
| *1496 | 97 | 27 | 1553 |  | 1418 | We 15 Mar | B7 | 50 | Chast |  | 1247 |
| 1497 | 98 | $27-$ | 1554 | Srav | 1419 | ( 5 Mar | 58 | 51 | Vals |  | 124.9 |
| 1498 | 99 | 27 - | 1555 |  | 1420 | Sa $2 \pm$ Mar | 59 | 52 | Jyerh |  | 1249 |
| 1499 | 4600 | 28 - |  |  | 1421 | Th 14 Mar | 2450 |  | Anhad |  | 1250 |
| * 1600 | 4601 | 27 - | 1557 | Jyeak | 1422 | Mo 2 Mar | 2 | 7754 | Hhid |  | 1251 |

TABLE XVII.-(Continued)
General Table of Comesponding Dates


## TABL표 XVII.-(Continued.)

General Table of Corresponding Dates.

| A D | Solar-Year |  | Luni Solab-Year |  |  |  | Jupiter-Cycles |  |  |  |  | 砢 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kalı Yuga | Initial Day | $\left\|\begin{array}{l} V_{1} \mathbf{z} \\ S \approx m \end{array}\right\|$ | Intorcal Month | $\left\lvert\, \begin{gathered} \text { Sak } \\ \text { Sal } \end{gathered}\right.$ | Intial Day | 60 Years |  | $\underset{\text { Years }}{12}$ |  |  |  |
|  |  |  |  |  |  |  | 8 Sid | Tel |  |  |  |  |
| 1531 | 4632 | 28 Mar | 1588 |  | 1453 | S 19 Mar | 2533 | 7825 | Chart | 7 | 1282 |  |
| * 1632 | 33 | 27 - | 1889 | Bhad | 1454 | Fr 8 Mar | 34 |  | Vaıs | 8 | 1283 |  |
| 1533 | 34 | 27 - | 1590 |  | 1405 | We 26 Mar | 35 | 27 | Jyesh | 9 | 1284 |  |
| 1684 | 35 | 28 - | 1501 |  | 14076 | Mo 16 Mar | 36 | 28 | Ashad | 10 | 1285 |  |
| 1535 | 36 | 28 - | 1592 | Brip | 14857 | Fr 6 Mar | 97 | 29 | Srâv | 11 | 1286 |  |
| ${ }^{*} 1536$ | 37 | 27 - | 1593 |  | '1458 | Th 29 Mar | 98 | 30 | Bhâd | 12 | 1287 |  |
| 1597 | 38 | 28 - | 1504 |  | 1459 | Tu 13 Mar | 39 | 31 | Abwa | 13 | 1288 |  |
| 1638 | 39 | 28 - |  | Jyesh | 1460 | Sa 2 Max | 40 | 92 | Kart | 14 | 1280 |  |
| 1539 | 40 | 28 |  |  | 1461 | F: 21 Mar | 41 | 33 | Agra | 15 | 1200 |  |
| * 1840 | 4641 | 27 - | 1587 |  | 1462 | Tu 9 Mar | 42 | 34 | Paush | 16 | 1291 |  |
| 1541 | 4642 | 28 Mar | t598, | Chait | 1463 | S 27 Feb | 49 | 85 | Mâgh | 17 | 1292 |  |
| 1542 | 43 | $28-$ | 1899 |  | 1464 | Sa 18 Mar | 4 | 36 | Phal | 18 | 1293 |  |
| 1549 | 44 | 28 - | 1600 | Srâv | 1465 | We 7 Mar | 45 | 87 | Chat | 19 | 1294 |  |
| *1544 | 45 | 27 - | 1601 |  | 1466 | Tu 25 Mar | 46 | 38 | Vala | 20 | 1290 |  |
| 1545 | 46 | 28 - | 1602 |  | 1467 | S 15 Mar | 47 | 39 | Jyesh | 21 | 1296 |  |
| 1548 | 47 | 28 - | 1603 | Ashâd | 1468 | Th 4 Mar | 48 | 40 | Abbad | 22 | 1297 |  |
| 1547 | 48 | 28 - | 1604 |  | 1469 | We 23 Mar | 49 | 11 | Sréy | 23 | 1298 |  |
| *1548 | 49 | 27 - | 1605 |  | 1470 | S 11 Ma | 50 | 42 | Bhed | 24 | 1290 |  |
| 1549 | 50 | 28 - | 1606 | Vals | 1471 | Fr 1 Mar | 51 | 43 | Abwa | 25 | 1800 |  |
| 1550 | 4651 | 28 - | 1807 |  | 1472 | We 19 Mar | 52 | 44 | Kârt | 26 | 1801 |  |
| 1551 | 4652 | 28 Mar | 1608 | Bhâd | 1473 | 58 Mar | 53 | 45 | Agra | 27 | 1802 |  |
| *1552 | $68$ | $27-$ | 1809 |  | 1474 | Sa 26 Mar | 54 | 46 | Paush | 28 | 1303 |  |
| 1558 |  | 28 -- | 1610 |  | 1475 | Th 16 Mar | 55 | 47 | Mâgh | 29 | 130+ |  |
| 1554 | 55 | 28 - | 1611 | Ashad | 1478 | Mo 5 Mar | 56 | 48 | Phà | 30 | 1305 |  |
| 1555 | 56 | 28 - | 1612 |  | 1477 | S 24 Mar | 57 | 49 | Cbert | 31 | 1806 | 063 |
| *1556 | 57 | 27 - | 1619 |  | 1478 | Th 12 Mar | 58 | 50 | Vais | 82 | 1807 | 964 |
| 1657 | 58 | 28 - | 1614 | Jyesh | 1479 | Tu 2 Mar | 59 |  | Jyesh | 83 | 1808 | 965 |
| 1558 | 59 | 28 | 1615 |  | 1480 | Mo 21 Mar | 60 | 52 | Ashad | 84 | 1909 | 086 |
| 1559 | 80 | 28 - | 1616 | Aswa | 1481 | Fr 10 Mar |  |  | Sris | 85 | 1810 | 987 |
| * 1600 | 4681 | 27 - | 1617 |  | 1482 | We 27 Mar | 282 | 78. 54 | Bhid | 96 | 1811 | 968 |

TABLE XVI.-(Continued.)
General Table of Corresponding Dates


## TABL思 XVII，－（Continued．）

General Table of Corresponding Dates．

| A D | Solar－Year |  | Luni－SOLSE－YEAR． |  |  |  | Jupiter－Cyolss， |  |  |  | $\begin{aligned} & \text { 蒠 } \\ & \text { 豆 } \\ & \text { 5 } \end{aligned}$ | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kah <br> Yuga | Intial Day | $\begin{gathered} \text { Vil } \\ \text { Samm } \end{gathered}$ | Intercal Month | Sak | Infital Day | 60 Feare |  | $\begin{gathered} 12 \\ \text { Yoars } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | s sid | Tel |  |  |  |  |
| 1591 | 4692 | 28 Mar | 1548 |  | 10\％13 | Tu 15 Mar | 2634 | 7928 | Vais | 67 | 184 | 998 |
| ＊1592 | 93 | 28 | 1049 | Ashari | 1514 | 55 Mar | 35 | 26 | Jyesh | 68 |  | 1000 |
| 1693 | 94 | 28 － | 1650 |  | 1515 | Fr 23 Mar | 36 | 27 | Ashad | 69 | 13 | 1001 |
| 1594 | 95 | 28 － | 1651 |  | 1516 | Tu 12 Mar | 37 | 28 | Srậ | 70 | 13 | 1002 |
| 1595 | 96 | 28 － | 1632 | Jyesh | 1617 | 52 Mar | 38 | 29 | Dhat | 71 | 18 | 003 |
| ＊1596 | 97 | 28 － | 1653 |  | 1518 | Ba 20 Mar | 39 | 30 | Aswa | 72 | 13＋ | 1004 |
| 1597 | 96 | 28 | 1654 | Aswa | 1510 | We 9 Mar | 40 | 31 | Kart | 73 | 134 | 000 |
| 1596 | 99 | 28 － | 16 ¢\％ |  | 1520 | Tu 28 Mar | 41 | 32 | Agra | $7 \pm$ | 131 | 1000 |
| 1598 | 4700 | 29 － | 1666 |  | 1621 | S 18 Mar | 42 | 33 | Paush | 75 | 13 | 1007 |
| ＊ 1600 | 4701 | 28 | 1687 | Srár | 1622 | Th 6 Mar | 43 | 34 | Magh | 76 | 13 | 008 |
| 1601 | 4702 | 28 Mar | 1556 |  | 1529 | We 25 Mar | 44 | 35 | Phâl | 77 | 135 | 1000 |
| 1602 | 08 | 28 － | 1659 |  | 1524 | S 14 Mar | 45 | 36 | Chart | 78 | 185 | 010 |
| 1603 | 04 | 29 － | 1660 | Ashad | 1595 | Fr 4 Mar | 45 | 37 | Vals | 79 | 135 | 1011 |
| ${ }^{*} 1604$ | 05 | 28 － | 1661 |  | 1626 | Th 22 Mar | 47 | 38 | J yesh | 80 | 136 | 012 |
| 1605 | 06 | 28 | 1662 |  | 1527 | Mo 11 Mar | 48 | 39 | Ashad | 81 | 135 | 1013 |
| 1606 | 07 | 26 － | 1668 | Ohnat | 1628 | Fr 28 Feb | 49 | 40 | Stà | 82 | 135 | 014 |
| 1607 | 08 | 29 | 1664 |  | 1529 | Fr 20 Mar | 50 | 41 | Bhad | 83 | 130 | 15 |
| ${ }^{+1608}$ | 09 | 28 － | 1655 | Bhad | 1530 | Tu 6 Mar | 51 | 42 | Abwa | 84 | 135 | 16 |
| 1609 | 10 | 26 | 1655 |  | 1531 | S 26 Mar | 62 | 13 | Kât | 65 | 136 | 1017 |
| 1510 | 4711 | 28 － | 1667 |  | 1632 | Th 15 Mar | 53 | 44 | Agra | 88 | 180 | 1016 |
| 1611 | 4712 | 29 Mar | 1668 | Ashad | 1533 | We 6 Mar | 54 | 45 | Paush | 87 | 13 | 1019 |
| ＊1612 | 13 | 28 － | 1669 |  | 1684 | Mo 23 Mat | 5\％ | 46 | Mâgh | 88 | 136 | 20 |
| 1618 | 14 | 26 | 1670 |  | 1635 | Fr 12 Mar | 56 | 47 | Phâl | 89 | 13 | 1021 |
| 1614 | 15 | 28 － | 1671 | Jyeah | 1536 | Ta 1 Mar | 57 | 46 | Chart | 90 |  | 022 |
| 1615 | 16 | 29 | 1672 |  | 1597 | Tu 21 MKar |  |  | V218 | 91 | 136 | 28 |
| ＊ 1615 | 17 | 26 － | 1673 | Aswa | 1638 | Sb 9 Mar | 69 |  | Jyesh | 92 | 136 | 24 |
| 1617 | 18 | 28 － | 1674 |  | 1639 | Fr 26 Mar | 60 |  | Abhad | 98 | 18 | 1025 |
| 1618 | 18 | 28 － | 1675 |  | 1640 | Ta 17 Mar | 271 |  | Srev | 94 | 12 | 1046 |
| 1019 | 20 | 29 | 1676 | Brav | 1841 | 57 Mar | 2 |  | Bhad | 95 | 187 | 1027 |
| ${ }^{+1620}$ | 4721 | 38－ | 1677 |  | 1642 | $\mathrm{gb}_{8} 25 \mathrm{Mar}$ | 8 | 7954 | Aswa | 96 | 137 | 1028 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE XVII,-(Continued.)
General Table of Coriesponding Dates


## TABLE XVII.-(Continued.)

General Table of Corvesponding Dates

| A D | Solar Year. |  | Luni-Solar Year |  |  |  | Jupiter-Cyoles. |  |  |  |  | 告 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Kali } \\ \text { Yuga } \end{gathered}$ | Initial Day |  | Intercal Month | $\left\|\begin{array}{c} \text { sak } \\ \text { Sal } \end{array}\right\|$ | Initial Day | 60 Years |  | $\stackrel{12}{\text { Years }}$ |  |  |  |
|  |  |  |  |  |  |  | 3 S |  |  |  |  |  |
| 1651 | $4752$ |  |  |  | 1573 | Th 13 Mar | 2734 | 8025 | Vals |  |  | 1059 |
| *1652 |  | $28-1$ | 1709 | Vals | 1.574 | Mo 1 Mav | 35 | 20 | Jyesh | 28 | 14031 | 1060 |
| $16{ }^{\text {a }}$ | $5 \pm$ | 29 - |  |  | 1.575 | Mo 21 Mar | 36 | 27 | Ashad | 29 | 1404 | 1061 |
| 16at | 58 | $29-$ | 1711 | Bhed | 1576 | Fr 10 Mlr | 37 | 28 | Srív | 30 | 1405 | 1062 |
| 1655 | 56 | 29 - |  |  | 1575 | We 28 Mar | 38 | 29 | Bhid | 31 | 1406 | 1063 |
| ${ }^{*} 1656$ | 57 | $28-$ |  |  | 1578 | Sa 16 Mar | 39 | 30 | Aewa |  | 1407 | 064 |
| 1657 | 58 | 29 - |  | Srav | 1579 | Sa 7 Mar | 40 | 31 | Kart | 33 | 1408 | 1068 |
| 1658 | 59 | 29 - |  |  | 1580 | Th 2 ä Mar | 41 | 32 | Agra | 34 | 1409 | 1066 |
| 1659 | 60 | 29 - | 1716 |  | 1581 | Mo 14 Mar | 42 | 33 | Pauah | 35 | 1410 | 1067 |
| ${ }^{*} 1660$ | 4761 | 28 - | 1717 | Jyesh | 1882 | Fr 2 Mar | 43 | 34. | Magh |  | , 1411 | 1088 |
| 1661 | 4762 | 29 Mar | 1718 |  | 1583 | Fr 22 Mar | 44 | 95 | Phal | 37 | 1412 | 1069 |
| 1662 | 63 | 29 - | 1719 |  | 1584 | Tu 11 Mar | 45 | 36 | Chart |  | 1413 | 1070 |
| 1663 | 61 | 29 - |  | Chatt | 1385 | Sa 28 Feb | 46 | 37 | Vals | 39 | 141 | 1071 |
| ${ }^{1} 1664$ | 65 | 28 - |  |  | 1586 | Sa 10 Mar | 47 | 18 | Jyesh |  | 141 | 072 |
| 1665 | 66 | 29 - | 1722 | Srav | 1587 | Th 9 Mar | 48 | 391 | Ashad |  | 1416 | 1073 |
| 1666 | 67 | 29 - |  |  | 1588 | Tu 28 Mar | 49 | 40 | Srav |  | 141 | 1074 |
| 1667 | 68 | 29 - |  |  | 1584 | Sa 16 Mar | 50 | 43 | Bhâd |  | 1418 | 1075 |
| *1868 |  | 28 - | 1725 | Ashad | 1590 | We 4 Mar | 51 | 42 | Abwa |  | $1+10$ | 1076 |
| 1669 | 70 | 29 - |  |  | 1591 | $1 \mathrm{Ta}^{23} \mathrm{Ma}$ | 52 | 43 | Kârt |  | ${ }_{6} 1120$ | 1077 |
| 1670 | 4771 | 29 29 | $\left\lvert\, \begin{gathered}1726 \\ 1727\end{gathered}\right.$ |  |  | 2 Sa 12 Mar | -54 |  | Paush |  | 61421 | 1078 |
| 1671 | 4772 | 29 Mar | 1728 | Vale | 1893 | We 1 Mar | 50 | 45 | Mâgh |  | 471422 | 1078 |
| ${ }^{*} 1672$ |  | $28-$ |  |  | 1094 | Ta 19 Mar | - 58 | 46 | Phal |  | 481428 | 1080 |
| 1673 | 74 | $29-$ |  | Bhad | 1595 | 59 Mar | 87 | 47 | Chert |  | 481424 | 1081 |
| 1674 |  | $29-$ | 1731 |  | 1096 | Sa 28 Mra | 58 | 48 | Vale |  | 501425 | 1082 |
| 1675 | 76 | $29-$ |  |  | 1597 | 7 We 17 Mar | \% 59 | 49 | Jyesh |  | 511428 | 1088 |
| *1676 | 77 | 29 - | 1733 | Srâv | 1508 | S 5 Mar | r 60 | 50 | Ashed |  | 521427 | 1084 |
| 1677 | 78 | 29 - | 1731 |  |  | S 20) Mar | 281 | 51 | Srav |  | 581428 | 1085 |
| 1678 | 79 | $29-$ | 1785 |  | 1600 | $0^{\prime}$ Th 14 Mar |  | , | Bhed |  | 541429 | 1086 |
| 1679 | 80 | $29-$ | 1736 | Jyesh | 1601 | Mo 3 Mar |  | 83 | Aswa |  | 65.1430 | 01087 |
| *1680 | 4781 | 28- | 1737 |  | 1602 | 2821 Mar | $r 4$ | 80.64 | Kart |  | 661431 | 11088 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLER XVII--(Continued.)
General Table of Corresponding Dates.


TABLR XVII.-(Continued.)
General Table of Corresponding Datse.


TABLE XVII．－（Continued．）
Goneral Table of Corresponding Dates

| A．D． | Solab－YEar |  | Luni－Solab Yeab |  |  |  | Jufiter－Ctcces |  |  | $\begin{aligned} & \text { 息 } \\ & \text { N } \\ & \text { 部 } \\ & \text { 品 } \end{aligned}$ | 思㤩恶 | 者 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\|\begin{array}{c} \text { Kali } \\ \text { Yuga } \end{array}\right\|$ | Initial Day | $\left\|\begin{array}{c} V_{1 k} \\ S B m \end{array}\right\|$ | Intercal Month | $\left\|\begin{array}{l} \text { Sak } \\ \mathbf{S a l}^{2} \end{array}\right\|$ | Inatiol Day | 60 Yemra． |  | $\stackrel{12}{\text { Year }}$ |  |  |  |
|  |  |  |  |  |  |  | S SId | Tol |  |  |  |  |
| 1741 | 4842 | 29 Mar | 1708 | Stiv | 1663 | Sa 7 Mar | 29 B | 81.58 | Agra |  | 1492 | 1148 |
| 1742 | 43 | 80－ | 1799 |  | 1604 | Sa 27 Mar |  | ${ }_{66} 6$ | Paush |  | 1493 | 1150 |
| 1743 | 44 | $80-$ | 1800 |  | 1668 | We 16 Mar | 7 |  | Magh |  | 1494 | 51 |
| ＊1744 | 48 | 29 － | 1801 | Ashed | 1666 | 84 Mar | 8 | 68 | Phal |  | 1495 | 1152 |
| 1745 | 46 | $29-$ | 1802 |  | 1667 | Se 23 Mar | 9 |  | Ohait |  | 1496 | 8 |
| 1746 | 47 | $30-$ | 1803 |  | 1668 | Th 13 Mar | 10 | 60 | Fass |  | 1497 | 54 |
| 1747 | 48 | $30-$ |  | Chat | 1669 | Mo 4 Mar | 11 | 821 | Jyesh |  | 1498 | b 5 |
| ＋1748 | 4 | $29-$ | 180 a |  | 1670 | Sa 19 Mar | jn | － | Abhad |  | 14991 | 1156 |
|  |  |  | 1806 | Bhid | 1671 | Th 9 Mar | 13 |  | Srev |  | 1600 | 1167 |
| 1749 1750 | 50 | $29-$ $30-$ | 1807 | Bhed | 1672 | We 28 Mar | 1 |  | Bhad |  | 1501 | 1158 |
| 1750 | 4851 | $30-$ |  |  |  |  |  |  |  |  |  |  |
| 1761 | 4852 | 80 Mar | 1808 |  | 1678 | S 17 Mar | 18 | $\delta$ | Anwa |  | 1502 | 1150 |
| －${ }^{\text {－}} 1762^{*}$ | 58 | $29-$ | 1809 | Ashad | 1674 | Th 5 Miar | 16 | 6 | Kart |  | 1503 | 1100 |
| N S 1758 | 54 | 9 Apr | 1810 |  | 1678 | Wo $\ddagger$ Apr | 17. | 7 | Agra |  | $180 \pm$ | 1181 |
| $178 \pm$ | 55 | $10-$ | 1811 |  | 1676 | No 28 Mar | 18 |  | Pauah |  | 1508 | 16 |
| 1758 | 56 | $10-$ | 1812 | Jyesh | 1077 | Fr 14 Mar | 20 |  | Phal |  | 1500 | 89 |
| 1785 +1756 | 57 | $10-$ |  | Jyenh | 1678 | Th 1 Apr | 21 | 10 | Ohat |  | 1507 | 84 |
| 1757 | 58 |  |  | A | 1679 | Mo 21 Mar | 22 | 11 | Vars |  | 508， | 168 |
| 1788 | ${ }^{\circ}$ | $10-$ |  |  |  |  |  |  |  |  | 1509 | 1166 |
| 1788 | 69 | $10-$ |  |  | 1680 | S 9 Apr | 23 | 12 | Ascad |  |  | 1167 |
| 1769 | 60 | $10-$ | 1816 |  | 1681 | Ir 30 Mar | 26 | 18 | Ashad |  |  | 1188 |
| ＋1780 | 4881 |  |  | Srity | 1682 | Ta 18 May | 25 | 14 | Srav |  | 1811 | 1168 |
|  |  |  | 1818 |  | 1683 | Fr 6 Apr | 26 | 15 | Bhid |  | 1512， | 1169 |
| 1762 |  | 10 Apr | 1819 |  | 1684 | Sa 27 Mar | 27 |  | Aswa |  | 1519 | 1170 |
| 1768 |  | 10 10 |  |  | 1685 | We 16 Mar | 28 |  | Kart |  | 1514 | 1171 |
| 1768 +1764 |  | $10-$ |  | Jyesh | 1656 | Mo 2 Apr | 20 | 18 | Agra |  | 1515 | 1172 |
| ${ }^{*} 1764$ | 65 | $9-$ | 1821 |  | 16S6 | Mo 2 Apr <br> Sa 23 <br> Mar | 20 80 | 18 | Paush |  |  | 1173 |
| 1768 | 66 | $10-$ | $\left\lvert\, \begin{aligned} & 1822 \\ & 1823\end{aligned}\right.$ |  | 1687 | Sa 23 Mar We 12 Mar | 80 31 | 20 | Pangh Megh |  | $1517$ | 1174 |
| 1766 | 67 | $10-$ | 1823 | Chait | 1688 | We 12 Mar | 31 32 | 20 21 | Phal |  | $1518$ | 3 |
| 1767 +1768 |  | $10-$ | $1 \begin{aligned} & 182 t \\ & 1825\end{aligned}$ |  | 1689 | Ta 31 Mar Fr 19 Mar | 32 83 | 21 22 | Ohalt |  | 151 | 176 |
| ＋1768 | $68$ | $9-$ | 1825 |  | 1690 |  | 88 84 | 23 | Vain |  | $1520$ | 1177 |
| 1769 | 70 | $10-$ $10-$ | 1826 |  | 1691 | Sa 8 Apr We 23 Mar | 2835 | 82．24 | Jyeah |  | 1521 | 1178 |
| 1770 |  | 10 － | 1827 |  | 1692 | We 23 Mar |  |  |  |  |  |  |

## TABLT XVII,-(Continued,)

General Table of Corresponding Dates

| A. D. | golat-YEar |  | LUMI-SOLAR-TEAR |  |  |  | Jupiter-Ctolen. |  |  |  | $\begin{aligned} & \text { g } \\ & 0 \\ & \text { 合 } \\ & 0 \end{aligned}$ | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Kali } \\ & \text { Yuga } \end{aligned}$ | Initial Day | $\left\|\begin{array}{c} \text { Vik } \\ \text { Sam } \end{array}\right\|$ | Interal Month | $\left\lvert\, \begin{aligned} & \text { Sak } \\ & \text { Bal } \end{aligned}\right.$ | Initial Day | 60 Yeara |  | $\begin{gathered} 12 \\ \text { Yearn } \end{gathered}$ |  |  |  |
|  |  |  |  |  |  |  | 8 Sid | Tel |  |  |  |  |
| 1771 | 4872 | 10 Apr | 1828 | Aahad | 169s | S 17 Mar | 2986 | 8225 | Anhad | 47 | 152 | 11 |
| ${ }^{+1772}$ | 73 | 9 - | 1829 |  | 1894 | Th 4 Mar | 87 | 28 | Srav |  | 1828 | 1180 |
| 1778 | 74 | 10 | 1830 |  | 1895 | Th 25 Mar | 38 | 27 | Bhtd | 48 | 1824 | 181 |
| 1774 | 75 | 10 | 1831 | Tals | 1896 | Mo 14 Msr | 88 | 28 | Aswa |  | 1525 | 2 |
| 1778 | 78 | $10-$ | 1882 |  | 1897 | S 2 Apr | 40 | 29 | Kart | 51 | 1828 | 88 |
| ${ }^{1778}$ | 77 | 9 - | 1838 | Bhad | 1698 | Th 21 Mar | 41 | 80 | Agra | 5 | 1527 | 4 |
| 1777 | 78 | $10-$ | 1884 |  | 1698 | We 9 Apr | 42 | 81 | Pauah | 58 | 1528 | 1186 |
| 1778 | 79 | $10-$ | 1835 |  | 1700 | Mo 30 Mar | 48 | 82 | Magh | 54 | 1529 | 8 |
| 1779 | 80 | 10- | 1836 | Sriv | 1701 | Fr 19 Mar | 44 | 88 | Pb 4 |  | 1580 | 1187 |
| +1780 | 4881 | $\theta$ | 1837 |  | 1702 | We 6 Apr | 48 | 34 | Ohat |  | 1881 | 1189 |
| 1781 | 4882 | 10 Apr | 1838 |  | 1703 | Mo 26 Mar | 48 | 85 | Vals | 87 | 1532 | 1189 |
| 1782 | 83 | 10- | 1889 | Jyeeh | 1704 | Fr 15 Mar | 47 | 86 | Jyenh |  | 1638 | 1190 |
| 1788 | 84 | $10-$ | 1840 |  | 1705 | Th 3 Apr | 48 | 37 | Ashad |  | 1834 | 1191 |
| *1784 | 88 |  | 1841 |  | 1700 | Mo 22 Mar | 49 | 88 | Srav |  | 1535 | 92 |
| 1785 | 86 | 10 - | 1842 | Chait | 1707 | Sa 12 Mar | 80 | 89 | Bhed | 51 | 1838 | 1193 |
| 1788 | 87 | $10-$ | 1849 | . | 1708 | Er 81 Mar | 81 | 40 | Aswa | 82 | 1837 | - |
| 1787 | 88 | 10 - | 1844 | griv | 1709 | Tu 20 Mar | 82 | 41. | Kirt |  | 15.5 | 908 |
| ${ }^{*} 1788$ | 89 | 10 | 1845 |  | 1710 | Tu 8 Apr | 58 | 42 | Agra |  | 1539 | 1196 |
| 1780 | 80 | 10 | 1848 |  | 1711 | Sa 28 Mar | 84 | 43 | Paush |  | 1540 | 197 |
| 1790 | 4891 | $10-$ | 1847 | Ashed |  | We 17 Mar |  |  | Magh |  | 1541 | 1198 |
| 1701 | 4892 | 10 Apr | 1848 |  | 1718 | Tr 5 Apr |  | 45 | Phal |  | 1842 | 1188 |
| ${ }^{1} 1702$ | 98 | $9-$ | 1848 |  | 1714 | Sa 24 Mar | 57 | 48 | Chalt |  | 154 | 1200 |
| 1788 | 94 | $10-$ | 1850 | Vais |  | Th 14 Mar | 58 | 47 | Vais |  | 1644 | 01 |
| 1794 | 95 | $10-$ | 1851 |  | 1716 | Tu 1 Apr | 89 | 48 | Jyemh |  | 154 | 2 |
| 1796 | 98 | $10-$ | 1852 | Bhad |  | S 22 Mar | 60 | 49 | Aehad |  | 16 |  |
| ${ }^{*} 1798$ | 97 | 10- | 1858 |  | 1718 | St 9 Apr | 3081 |  | grav |  |  | 4 |
| 1797 | 98 | $10-$ | 1854 |  |  | We 29 Mar |  | 51 | Bhad |  | 184 | 08 |
| 1798 | 90 | $10-$ | 1858 | Brav | 1720 | g 18 Mm |  | 62 | Anwa | 7 | 154 | 1206 |
| 1790 | 4900 | 10 | 18888 |  | 1721 | St 6 Apr |  | 68 | Kirt |  | 1580 | 08 |
| ${ }^{-1800}$ | 4801 | 11 - | 1887 | - | 1722 | Th 27 Mar | 308 | 82.64 | Agra |  | 1851 | 1206 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE XVII.-(Continued.)
General Table of Correupunding


TABLs EVII.-(Oontinued.)
Goneral Table of Corresponding Datea.


+ Paushe oreveded, and Clualtra interenlary.

TABLE XVII.-(Continued.)
General Table of Corresponding Dates.
A. D.


## TABLIT XVII-(Continined.)

General Table of Corresponding Dates


## TABLㅍ XVII.-(Continued.)

General Table of Consesponding Dates

| A D | Solab-Yxat |  | Lumt Solab-Ygab |  |  |  | Jupineu Ciches |  |  |  | 霛 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kalı Yuga. | Initial Day | VikSam | Intercal Month | $\begin{aligned} & \text { Snk } \\ & \text { Sal } \end{aligned}$ | Itital Day | 60 Years |  | $\begin{gathered} 12 \\ \text { Years } \end{gathered}$ |  |  |
|  |  |  |  |  |  |  | 8 sid | Tel |  |  |  |
| 1021 | 0022 | 13 Apr | 1978 | ... | 1843 | Ba 9 Apr | 327 | 8455 | Màgh | 97 | 1300 |
| 1922 | 23 | 13 - | 1979 |  | 1844 | We 29 Mar | 8 | 66 | Phal | 98 | 1301 |
| 1323 | 24 | 18 - | 1980 | Jyeeh | 1846 | $3 \quad 18 \mathrm{Mar}$ | 9 | 57 | Chait | $\varepsilon 9$ | 1702 |
| *1924 | 24 | $13-$ | 1981 |  | 1846 | S 6 Apr | 10 |  | Vass | 100 | 1303 |
| 1925 | 26 | $13-$ | 1982 |  | 1817 | Th 26 Mar | -12 |  | Ashad | I | 1304 |
| 1926 | 27 | 18 - | 1983 | Chatt | 1848 | Mo 16 Mar | 1.3 | 60 | Srût | 2 | 308 |
| 1997 | 28 | 13 - | 1984 |  | 1849 | S 3 Apr | 14 | 851 | Bhad | 3 | 306 |
| *1828 | 20 | 13 - | 1986 | Srât | 1850 | Fr 23 Mar | 15 | 2 | Aswa | 4 | 1307 |
| 1929 | 30 | $13-$ | 1986 |  | 1861 | Th 11 Apr | 16 | 8 | Kart | 6 | 308 |
| 1830 | 5031 | $13-$ | 1987 |  |  | Mo 31 Mar | 17 | 4 | Agra | 6 | 1309 |
| 1991 | 6032 | 13 Apr | 1988 | 1 Hhad | 1863 | Fr 20 Mar | 18 | 6 | Paush | 7 | 1310 |
| -1932 | 33 | $13-$ | 1989 |  | 18 t | Th 7 Ap | 19 | 6 | Magh | 8 | 1311 |
| 1983 |  | $13-$ | 1090 |  | .85s | Mo 27 Mar | 20 | 7 | Pbàl | 9 | 1312 |
| 1934 | 3 | 13 - | 1991 | Vais | 1856 | Sa 17 Mar | 21 | 8 | Chart | 10 | , |
| 1935 | 36 | 14 - | 1092 |  | 1857 | Fr 5 Apr | 22 | 9 | Vals | 11 | 1 t |
| * 1436 |  | $13-$ | 1903 | Blad | 1858 | Tu 21 Mar | 23 | 10 | Jyesh | 12 | 18 |
| 1837 | 38 | $13-$ | 1994 |  |  | 30 12 Apr | 24 | 11 | Ashati | 15 | 316 |
| 1998 | 14 | 13 - | 1996 |  | 1800 | Fr 1 Apr | 25 | 12 | Srůu | 14 | 1317 |
| 1930 | $41)$ | 14 - | 1996 | Srar | 1861 | Ke 22 Mar | 24 | 13. | Bhad | 15 | 318 |
| *1840 | 6041 | $13-$ | 1997 |  |  | Tu 9 Apr | 27 | 14 | Aswa | 16. | 1318 |
| 1941 | 5042 | 13 Apr | 1498 |  | 1863 | Sin 29 Mar | 28 | 18 | Kart | 17 | 1320 |
| 1942 | 43 | $13-$ | 1999 | Jyesh |  | We 18 Mar | 29 | 16 | Agra | 18 | 1321 |
| 114: | 44 | 14 - | 2000 |  |  | We 7 Apr | 80 | 17 | Pausb | 19 | 1322 |
| *1944 |  |  | 2001 |  | 1866 | \$ 26 Mrr | 31 | 18 | Magh | 20 | 1323 |
| 1945 | 46 | 13 - | 2002 | Chast | 1867 | Th 16 Mar | 32 | 19 | Pbul | 21 | 1324 |
| 1946 | 47 | 13 | 2003 |  | 1868 | Tu 2 Apr | 33 | 20 | Chait | 22 | 1325 |
| 1947 | 48 | 14 | 2004 | Sráv |  | S 23 Mar | 34 | 21 | Vais | 23. | 1396 |
| -1048 | 49 | 13 | 2005 |  | 1870 | Ss 10 Apr | 35 | 22 | Jyesh | 34 | 1425 |
| 1940 | 50 | 13 | 2006 |  | 1871 | We 30 Mar |  | 23 | Ashind | 20 | 1328 |
| 1900 | 50 n 1 | 13 | 2007 | Ashad 1 | 1872 | Mo 20 Mar | 3237 | 8.524 | Slet | 26 | 1829 |

## TABLE XVII.-(Continued.)

General Table of Corresponding Dates


## TABLE XVII.-(Continued.)

General Table of Corresponding Dates

| A, D | Solab-Year |  | Luni-Solar-Year |  |  |  | Jutiter-Cyoles |  |  |  | 豈 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { Kalı } \\ \text { Yugan } \end{array}$ | Initial Day | $\left\lvert\, \begin{gathered} \text { Vik } \\ \text { Sam } \end{gathered}\right.$ | Intercal Month | $\begin{aligned} & \text { Sar } \\ & \text { Sall } \end{aligned}$ | Initial Day | 60 Years |  | $\underset{\text { Years }}{12}$ |  |  |
|  |  |  |  |  |  |  | S Sid | Tel |  |  |  |
| 1981 | 8082 | 13 Apr | 2038 | . | 1908 | S 5 Apr | 338 | 8555 | Phàl | 67 | 1360 |
| 1982 | 83 | 14 - | 2039 | Asma | 1004 | Fr 26 Mar | 9 | 66 | Chast | 58 | 1361 |
| 1083 | 84 | 14 - | 2040 |  | 1905 | Th 14 Apr | 10 | 87 | Vals | 59 | 1362 |
| 1984 | 88 | $13-$ | 2041 |  | 1906 | Mo 2 Apr | 11. | 88 | Jyeah | 60 | 1963 |
| 1985 | 86 | $13-$ | 2042 | Srat | 1907 | Mo 22 Mar | 12 | 80 | Ashad | 61 | 1964 |
| 1986 | 87 | 14 - | 2043 |  | 1908 | Fr 11 Apr | 19 | 60 | Sráp | 62 | 1368 |
| 1987 |  | 14 - | 2044 |  | 1909 | Tu 31 Mar | 14 | 861 | Bhad | 68 | 1366 |
| 1988 |  | 13 | 2045 | Jjosh | 1910 | Sa 19 Mar | 15 |  | Aswa | 64 | 1987 |
| 1989 |  | $13-$ | 2046 |  | 1911 | Fr 7 Apr | 16 |  | Kart | 68 | 1968 |
| 1990 | 8091 | 14- | 2047 |  | 1912 | Wo 28 Mar | 17. | 4 | Agra | 66 | 1360 |
| 1991 | 8092 | 14 Apr | 2048 | Vels | 1913 | 317 Mar | 18 | 8 | Paush | 67 | 1870 |
| 1992 |  | 13 - | 2019 |  | 1914 | Sa 4 Apr | 18 |  | Magh | 68 | 1371 |
| 1993 |  | 14 - | 2050 | Bhed | 1915 | Th 25 Mar | 20 | 7 | Phál | 69 | 1372 |
| 1994 |  | 14 - | 2081 |  | 1916 | 6 Tu 12 Apr | 21 | 8 | Chait | 70 | 1373 |
| 1995 |  | 14 - | 2052 |  | 1917 | 7 Sa 1 Apr | 22 | 3 | Vala | 71 | 1374 |
| 1096 | 97 | 13 - | 2053 | Ashad | 1918 | 8 Th 21 Mar | 23 | 10 | Jyesh | 72 | 1378 |
| 1997 |  | $14-$ | 2084 |  | 1919 | We 9 Apr | 24 | 11 | Ashad | 78 | 1376 |
| 1908 | 99 | 14 - | 2085 |  | 1920 | S 29 Max | 25 | 12 | 8rât | 74 | 1377 |
| 1999 | 8100 | 14 | 2056 | Jyesh | 1921 | 1 Th 18 Mar | 26 | 13 | Bhad | 15 | 1378 |
| 2000 | 8101 | 13 | 2087 |  | 1922 | 2 We 6 Apr | 3327 | 8614 | Aswa | 76 | 1378 |

TABLEXVIIT.
Lust of Eclipses

| A D | Lunar. | Solar. | AD | Luxar. | Solaz |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 24 June | 10 June | 51 | 14 Apr - 8 Oot | 29 Sep |
| 2 | 15 May - 9 Nov | 23 Nov | 82 |  | 19 Mar |
| 3 | 4 May - 28 Oot |  | 53 | $21 \mathrm{Feb}-18 \mathrm{Ang}$ | 9 Mar |
| 4 | 23 Apr - 17 Oct | ${ }_{28}^{8} \mathrm{Mar}-22 \mathrm{Sep}$ | 5 | ${ }_{31} 1 \mathrm{Feb}$ - $7 \mathrm{7an}$ Aug | 23 July - 26 Fob |
| 6 | 3 Mar - 27 Ang | 28 Mar - 22 Sep | 56 | 10 Dec | 15 July - 25 Deo |
| 7 | 20 Feb - 17 Aug | 6 Feb - 31 Aag | 57 | 5 June - 29 Nov |  |
| 8 | 9 Feb - 5 Aug | 26 Jan | 58 | 26 May - 19 Nov | 11 May |
| 9 | 20 Dec | $15 \mathrm{Jan}-10 \mathrm{July}$ | 59 |  | $80 \mathrm{Apr}-250 \mathrm{Ot}$ |
| 10 | 15 June - 10 Dec | 30 June - 24 hov | 60 | $4 \mathrm{Apr}-28 \mathrm{Sop}$ | 13 Oct |
| 21 | 1 Jnne- 29 Nov | $1+\mathrm{NeV}$ | 62 | $24 \mathrm{Mar}-18 \mathrm{Sep}$ | $10 \mathrm{Mar}-20 \mathrm{ct}$ |
| 12 | 24 Mny | 9 May | 62 | 13 Mar - 7 Bep | 28 Frbb |
| 13 | $14 \mathrm{Apr}-7$ Oot | 28 Apr | 63 |  | 17 Feb |
| 14 | ${ }_{2}^{4} \mathrm{Apr}-27 \mathrm{Smp}$ | 18 Apr | 64 | 22 Jan - 17 July | 1 Ang |
| 16 | 24 Mar - 16 Sep | ${ }_{\text {21 }}^{\text {2 }}$ Aup | 65 | $\left\{\begin{array}{c}11 \text { Jan-6 July } \\ 31 \mathrm{Deo}\end{array}\right\}$ | 16 Deo |
| 17 | 10 Jan - 27 July | $1{ }^{\text {a }}$ Feb | $6{ }_{6}$ | 26 June |  |
| 18 | 20 Jnn - 16 July | 1 July | 67 | $17 \mathrm{May} \mathrm{-} 9 \mathrm{Ncv}$ | 31 May |
| 19 | 9 Jna - 5 July | 21 June - 15 Dec | 68 | 6 May - 29 Oot | 19 May |
| 20 | $25 \mathrm{May}-19 \mathrm{Nov}$ | 10 Junc - 3 Dec | 69 70 | $25 \mathrm{Apr}-18$ Oot | $\begin{aligned} & 4 \text { Oct } \\ & 23 \text { Sep } \end{aligned}$ |
| 21 | $15 \mathrm{May} \mathrm{-} 8 \mathrm{Nor}$ | 23 Nov |  |  |  |
| 22 | 4 May - 28 Oct | 10 Apr | 71 | 4 Mar - 29 Ang | 20 Mar |
| 23 |  |  | 72 | $22 \mathrm{Feb}-17 \mathrm{Aug}$ | $2{ }_{2}^{2} \mathrm{Aug}$ |
| 25 | 14 Mar - 6 Sap | 218 Bp | 73 | $11 \mathrm{Feb}-6$ Aug | 12 July |
| 20 | $20 \mathrm{Feb}-16 \mathrm{Aug}$ | ${ }_{6} \mathrm{Feb}$ | 75 | 17 June - 11 Dec | 5 Jan - 26 Deo |
| 27 | 31 Deo | 26 Jen - 22 July | 76 | 5 June - 29 Nov | 21 May |
| 28 | 2i June - 20 Dec | 10 Jnly | 77 |  |  |
| 29 | 14 June - 9 Dec | 24 Nov | 78 | 16 Apr - 8 Oct | $30 \mathrm{Apr}-24$ Oct |
| 10 | 4 June | 21 May - 14 Nov | 79 80 | $\begin{array}{r} 5 \mathrm{Apr}-20 \mathrm{Bep} \\ 24 \mathrm{Mar}-17 \mathrm{Bep} \end{array}$ | $130 \mathrm{ct}$ |
| 31 | 2; Apr - 19 Oot | 10 Mry |  |  |  |
| 32 | $1+\mathrm{Apr}-7$ Oct | 28 Apr | 81 |  | 27 Feb - 23 Ang |
| 34 | $3 \mathrm{Apr}-27 \mathrm{Sep}$ | 12 Spp | 82 | $2 \mathrm{Feb}-28$ July | 12 Aag |
| 34 |  | $9 \mathrm{Mar}-1$ Sep | 83 | 22 Jan - 17 July | $2 \mathrm{Aug}-27 \mathrm{Dec}$ |
| 35 | 11 Feb - 7 Aug | - | 81 | 11 Jan - 6 July | $16 \text { Deo }$ |
| 36 | 31 Jan - 26 July | 16 Feb - 12 July | 85 | 27 May - 20 Nov | 10 June |
| 37 | $20 \mathrm{Jan}-15 \mathrm{July}$ | 1 July - 25 Dec | R6 | 17 May - 9 Nar | ${ }^{31}$ May |
| 38 39 | ${ }^{30} \mathrm{Nov}$ May - 19 Nov | 21 June | 87 88 8 | 6 May - 30 Oot | 15 10 Oot $10 \mathrm{pr}-30$ |
| 40 | $15 \mathrm{May} \mathrm{-} 7 \mathrm{Nov}$ | 29 Apr | 84 | $15 \mathrm{Mar}-8 \mathrm{gep}$ | 30 Mar |
|  |  |  | 90 | 4 Mar - 28 Aug | 20 Mar |
| 41 |  | $19 \mathrm{Apr}-19$ Oct |  |  |  |
| 42 | ${ }^{25} \mathrm{Mar}$ - 18 Map | $2{ }^{2} \mathrm{OLt}$ | 91 | 22 Feb - 17 Ang |  |
| $48$ | 14 Mar $2 \mathrm{Mar}-27 \mathrm{Sap}$ | 28 FPb | 92 |  | 27 Jun - 27 July |
| 44 | $2 \mathrm{Mur}-27 \mathrm{Aug}$ | 17 Feb 1 Aug | 93 94 | 17 Janne - 210 Dec | 5 Jan - 1 Jnne |
| 46 |  | 22 July - 16 Dec | $8{ }^{8}$ | ${ }_{26} 6$ Jane - 20 Oct | $22 \mathrm{May}$ |
| 47 | $\underset{26 \mathrm{Jane} \rightarrow 21 \mathrm{Dec}}{ }$ |  | 97 | $26 \mathrm{Apr}-20$ Oct $15 \mathrm{Apr}-9$ Oot | 10 May - 8 Not |
| 48 | lf June | 31 May-2i Nor | 88 | $4 \mathrm{Apr}-28 \mathrm{Sep}$ | 21 Mar |
| 49 | 6 May - 29 Oct | 20 May | 99 |  | 3 Sep |
| 50 | $2 \overline{\text { 2 }}$ Apr - 18 Oct | 9 May | 100 | 13 Feb - 7 Ang | 28 Ang |

TABLE XVIII.-(Continued.)
List of Eclupses

| $A D$ | Lunar. | Solar. | $A \mathrm{D}$ | Lunaz | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 1 Feb-28 July | $17 \mathrm{Jan}-12 \mathrm{Ang}$ | 151 | 18 May - 11 Nov | $\left.2{ }^{2}\right)^{\text {Y }}$ |
| 102 | $22 \mathrm{Jua}-17 \mathrm{July}$ | 27 Dea | 152 | 6 Muy - 31 Oct | $2: A_{1} \mathrm{r}$ |
| 103 | 1 Dec | 23 Jnne | 153 | 2 L Apr | 1) Apm |
| 104 | 27 May - 19 Nov | 10 June | 104 | 17 Mnr - 9 Sep | 11 Mut-- ${ }^{5} 5 \mathrm{SLp}$ |
| 105 108 | 16 May - 9 Nov | 25 Oct | 1 lin | ${ }_{2} \mathrm{Mnr}-30 \mathrm{Aug}$ |  |
| 108 | 26 Mar - 20 Sop | 21 Apr 11 Apr | 154 157 | 21 Feb - 18 Aug | 25 Jan - $24 . \mathrm{Jmuo}$ |
| 108 | 13 Mar - 8 Sep | 30 $\mathrm{MaL}-24 \mathrm{Ang}$ | 158 | $\{2$ Jan-39 June $\}$ | 2ヵ गan - -a Jnowo |
| 109 | $4 \mathrm{Mar}-28 \mathrm{Aug}$ | $1+\operatorname{Aug}$ | 158 | $\{23 \mathrm{Dec}$; | 1) July |
| 110 |  | 8 Aug | 164 160 | $\begin{gathered} \text { is June - } 12 \mathrm{Dec} \\ \text { o Juwe } \end{gathered}$ | 23 Muy |
| 111 | 17 Jan - 8 July | 27 Jan 12 Jman | 161 | 22 Ort | 12 Mny |
| 112 | 16 Jan - 27 June | 12 Jine - 1 June - fov |  | $17 \mathrm{Apr}-11$ Oct | 2 May |
| 114 | 310 ct | ${ }_{23} \mathrm{May}$ - 15 Nov | 163 | 6 Apr - 30 Sep | YA 58 |
| 115 | 26 Apr - 21 Oct | + Nor | ${ }^{164} 16$ |  | ¢ 4 kap |
| 116 | $1+\mathrm{Apr}-9$ Oct | 31 Mar | 16, 16, | $13 \mathrm{Frb}-{ }^{9} \mathrm{Aug}$ $2 \mathrm{Fcb}-30 \mathrm{July}$ | $\begin{aligned} & 2 k k+b \\ & 18 \mathrm{l}+\mathrm{b} \end{aligned}$ |
| 117 118 |  | 21 Mar | 1117 | $23 \mathrm{Jon}-19 \mathrm{July}$ | +July |
| 118 | $23 \mathrm{Feb}-18 \mathrm{Ang}$ $13 \mathrm{Feb}-8 \mathrm{Alug}$ |  | 110, | \& Dre | 2, Juno- - 17 Dee |
| 120 | $2 \mathrm{Feb}-28$ July | 18 Jan | 117 170 | 28 M2y - 22 Nov 17 May - 11 Nor | $6 \text { Duc }$ $\sigma M_{n y}$ |
| 121 | 11 Deo | 2 July | 171 | 7 May | 22 Apr |
| 122 | 7 June - 1 Dec | 21 June | 172 | $27 \mathrm{Mar}-19 \mathrm{Sep}$ | 50 ct |
| 123 | 28 May - 21 Nov | 6 Nov | 173 | 17 Mar - 9 Sep |  |
| 124 |  | 1 May - 25 Oct | $17 \pm$ | 6 Mar - 30 Aug | 19 Feb |
| 12 B | $5 \mathrm{Apr}-30 \mathrm{Sep}$ | 21 Apr | 175 |  | 8 Feb - 4 Aug |
| ${ }_{126}^{126}$ | $26 \mathrm{Mar}-19 \mathrm{Sep}$ $16 \mathrm{Mar}-8 \mathrm{Sep}$ | ${ }_{25}^{10} \mathrm{Apr}-4 \mathrm{Scp}$ | 176 | 17 Jnn- ${ }^{\text {J July }}$ | 23 July |
| 128 | 16 Mar - | 25 Aug | 177 | $\left\{23{ }^{\text {dec }}\right.$, | 19 July - 8 Deo |
| 129 | 23 Jan - 10 July | 6. Feb | 178 | 17 Juno | 27 Yuv |
| 130 | 12 Jan - 8 July | 27 Jan - 23 June | 174 180 | ${ }_{27}^{2}$ Novpr - 21 Oct | $\begin{aligned} & 24 \mathrm{M} \text { ty } \\ & 12 \mathrm{M} \text { ay } \end{aligned}$ |
| 191 | 1 Jan - 28 Jnne | 12 June | 181 | $17 \mathrm{Apr}-10$ Oct | 26 Sep |
| 142 138 128 | 10 Nor | $1{ }^{1+}$ June - ${ }^{\text {a }}$; Nov | 182 |  |  |
| 178 154 | ${ }_{26}^{6} \mathrm{Mnyr}$ - 31 Oct | $1+\lambda o v$ $12 \mathrm{Apr}$ | 143 | 2) Fcb- 21 Aug $14 \mathrm{Feb}-9 \mathrm{Aug}$ | 11 Mar 29 l cbr |
| 135 | ${ }_{15} \mathrm{Apr}$ | 1 Apr - 25 Sep | 185 | 2 Feb-30 July | 1+3uly |
| 196 | 6 Mar -29 Ang 2 | 13 Sop | 186 | 14 Des | $\int_{j}^{8} \mathrm{Jan}_{28}-4 \text { July }$ |
| 197 198 | $29 \mathrm{Feb}-18 \mathrm{Aug}$ $12 \mathrm{Feb}-8 \mathrm{Aug}$ | 26 Sap | 187 | 8 Tune - 3 Dee | $17 \mathrm{Drec}{ }^{28} \mathrm{Deo}$ |
| 139 | 23 Deo | 18 Jun | 188 | $24 \mathrm{M}_{29}-21 \mathrm{Nor}$ | $1+$ May |
| 140 | 18 June - 11 Dec | 2 July | 189 190 | 17 Mry 8 Apr | $\begin{aligned} & \text { j Nay - } 27 \text { Oct } \\ & 2 \underset{\mathrm{Apr}}{ } \end{aligned}$ |
| 141 | 7 June - 1 Deo | 21 June - 16 Nov | 191 | 28 Mar - 20 Sep | 6 Oct |
| 142 | 27 May | 19 May - 5 Nov | 192 | 16 Mar - 9 ¢ep | 1 Mar |
| 143 | 17 Apr - 11 Oct | 2 May | 193 |  | 19 Teb |
| 144 | ${ }^{5}$ Apr - 29 Sep | 20 Apr | $19 \pm$ | 24 Jan - 20 July | 4 Aug |
| 145 | 26 Mar - 18 Sep | 4 Sep | 195 | 13 Jan - 10 July | 24 July - 19 Dec |
| 146 |  | 28 Feb | 196 | 3 Jan - 28 June | 7 Dec |
| 147 | 3 Feb - 80 July | 17 Feb | 197 | 12 Nor | 3 June |
| 148 | 23 Jan - 19 July | ${ }^{7}$ Jaly - 7 Feb | 198 | 8 May - 1 Nov | 27 May |
| 149 | 11 Jnn - 8 July | 23 June | 199 | $28 \Delta \mathrm{pr}-21$ Oct | 7000 |
| 160 | 22 Nov | 12 Jung - 6 Dec | 200 |  | 1 Apr |

TABLT XVIIL.-(Continued.)
List of Eclipses

| A.D | Lunar | Solar | AD | Lumail | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 201 | 7 Mar - 81 Ang | 22 Mar | 251 |  | $\begin{aligned} & 9 \text { Jan - } 6 \mathrm{Jaly} \\ & 24 \text { June } \end{aligned}$ |
| 2022 | $24 \mathrm{Feb}-20 \mathrm{Aug}$ | 11 Mar | 252 | 9 June - 3 Dec | 24 June <br> 14 June |
| 203 | ${ }_{17} 9 \mathrm{Feb}-10 \mathrm{Aug}$ | ${ }^{20}$ July | 253 <br> 254 | 30 May - 22 Noy 19 May - 12 Nov | 14 June 4 May - 29 Oct |
| 204 | 24 Dec | 14 July | 25. | 19 May - 12 Nor | 24 Apr |
| 2051 | 18 Jane - 18 June | ${ }^{28} 5 \mathrm{Meo}$ | 25.6 | 28 Mar | 12 Apr |
| 205 | ${ }_{28}^{8}$ Mnue - 3 Deo | 25 May 14 May | 257 | $17 \mathrm{Mar}-11 \mathrm{Bep}$ | 28 Aug |
| 2078 | 28 May 18 Apr | 14 May 2 May | 258 | $7 \mathrm{Mar}-15 \mathrm{Aug}$ | 15 Aug |
| 2081 |  | 2 May 16 Oct | 259 | 26 Jan - 21 July | 6 Aug |
| 210 | 28 Mar - 20 Sep | 18 Mar | 260 | 15 Jan - 11 July | 30 Jan |
| 211 |  | $2 \mathrm{Mnx}-25 \mathrm{Ang}$ |  | 4 Jan - 29 June | 15 Jnne |
| 212 | $4 \mathrm{Feb}-81 \mathrm{Jnly}$ | 14 Ang | 262 |  | $4 \mathrm{Jnne}-29 \mathrm{Nov}$ |
| 213 | 24 Jan - 20 July | 3 Ang | 263 | 10 May - 3 Nor | 18 Nov |
| 214 | 13 Jau - 9 July |  | 264 | $25 \mathrm{Apr}-22 \mathrm{Oct}$ | 14 Apr |
| 215 |  | 14 June | 265 | $17 \mathrm{Apr}-12$ Oct |  |
| 216 | 19 May - 12 Nov | 2 June | 266 | 8 Mar | 24 Mar - 16 Sep |
| 217 | 8 May - 1 Nov | 18 Oot | 257 | 26 Feb - 22 Ang | ${ }^{51}$ Sep |
| 218 | $28 \mathrm{Apr}-21 \mathrm{Oct}$ | $12 \mathrm{Apr}-7$ Oct | 268 | $15 \mathrm{Feb}-10 \mathrm{Arg}$ | 31 Jan |
| 219 | $18 \mathrm{Mar}-11 \mathrm{Sep}$ | ${ }_{22}^{2} \mathrm{Mpr}$ | 268 |  | ${ }_{6}^{16}$ July |
| 220 | 6 Mar - 31 Aug | 22 Mar | 270 | 20 June - 15 Dec | 5 July |
| 221 | 24 Feb - 20 Aug | 5 Ang | 271 | 10 Jnne-4Deo | 24 June - 20 Nor |
| 222 |  | 90 Jan - 28 Jnly | 272 | 30 May - 22 Nov | 8 Nov |
| 223 | \{ $4 \mathrm{Jan}-30 \mathrm{June}\}$ | 19 Jan | 273 | 4 May - 13 Oct | ${ }_{2} 4$ May |
| 22 | $\{25 \mathrm{Dec}$ |  | 274 | 8 Apr - 3 Oct | $2 \pm \mathrm{Apr}$ |
| 224 | 18 June - 19 Dec | $8 \mathrm{Jan}-4$ June | 275 | $29 \mathrm{Mar}-22$ Sept | 7 Sep - 26 Agg |
| 228 226 | 8 Jnne | 24 May - 17 Nov $7 \mathrm{Nov}$ | 276 278 | ${ }^{17} \mathrm{Mar}$ | $\begin{aligned} & 9 \mathrm{Mar}-26 \mathrm{Ang} \\ & 20 \mathrm{Feb} \end{aligned}$ |
| 227 | $19 \mathrm{Apr}-120 \mathrm{ct}$ |  | 278 | 26 Jan - 21 July | 9 Feb |
| 228 | $7 \Delta \mathrm{pr}-10 \mathrm{ot}$ | 29 Mar | 278 | $15 \mathrm{Jan}-11 \mathrm{Ju} \mathrm{l}^{\text {y }}$ | 25 June - 21 Deo |
| 229 |  | 13 Mar | 280 |  | 14 June - 9 Dea |
| 230 | 14 Fob | 25 Aug |  |  |  |
| 231 | 4 Trb - 11 Ang | 15 Aug | 281 | $21 \mathrm{May}-18 \mathrm{Nov}$ |  |
| 232 | 25 Jan - 19 July | 10 Jsan - 29 Deo | 282 | 10 May - ${ }^{\text {2 }}$ Nor April 23 Oct | ${ }_{15}^{25 \mathrm{Apr}}$ - B Oct |
| 233 |  | 25 Jrne | 283 <br> 284 | 29 Apri - 230 ct | $3 \mathrm{spr}-20 \mathrm{Sep}$ |
| 234 | ${ }^{30} \mathrm{May}$ - 23 Nuv | 14 June - 29 Oct | 28. | $8 \mathrm{Mar}-1 \mathrm{Sep}$ | 16 Sep |
| 2335 | 20 May - 12 Nav | 3 June - 27 Oct | 2815 286 | 25 Feb - 21 Aug | 11 Feb |
| 236 237 | 82 May - 31 Oct 22 Sep | 23 Apr - 17 Oct | 287 | 10 Ang | 31 Jan - 27 Jnly |
| 238 | 18 Mar - Il Sep | 2 Apr | 288 | 1 July - 25 Deo | 16 July |
| 238 | 7 Mar - 1 Sep | 16 Ang | 289 | 20 June - 14 Deo | 5 July - 80 Nov |
| 240 | 10 Feb | 5 去 5 | 290 | 10 Jnne - d Deo | 19 Noy |
| 241 | $15 \mathrm{Jan}-10 \mathrm{Jnly}$ | 29 Jan | 291 | 25 Ot | 15 May |
| 212 | $\left\{\begin{array}{c}4 \text { Jen- } 29 . \\ 24 \text { Deo }\end{array}\right\}$ | 15 Jane | 292 | $19 \mathrm{Apr}-13$ Oot | ${ }_{17} \mathrm{Maj}^{\text {Say }}$ |
| 243 | $19 \text { June }$ | 5 Jnue | 293 | $8 \mathrm{Apr}-2$ Oct | 17 Sep 14 Sar 7 Sep |
| 244 |  | 24 May | 294 | 28 Mar | 14 Mar - 7 Sop |
| 245 | $29 \mathrm{Apr}-2200{ }^{\text {O }}$ | 7 Nov | 295 | ${ }_{6}^{17} \mathrm{Feb}$ - 81 Jnly |  |
| 246 | $18 \mathrm{Apr}-12$ Oot | ${ }^{34} \mathrm{Apr}$ | 296 | 25 Jgn-21 July | 6 July - 31 Dee |
| 247 | ${ }_{26}{ }^{\text {Oct }}$ Feb-21 Ang | 24 Mar | 298 | 25 Ja - | 25 June - 20 Deo |
| 240 | 14 Feb - 10 Ang | 25 Ang | 279 | $1 \mathrm{Jnne}-24 \mathrm{Nov}$ | 10 Deo |
| 250 | 4 Feb-80 July | 20 Jan |  | 20 May - 13 Nut | 5 Ming |

TABLIF XVIII-(Continaed.)
Last of Eclupses

| A 1 | Lunar | ditan | A D | Luvar | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 301 | 9 May - 3 Nov | 25 Apr | 3015 | $27 \mathrm{Feb}-23 \mathrm{Aug}$ | $8{ }^{8}$ Aug ${ }^{\text {a }} 27$ July |
| 802 |  | 8 Oct | 35212 | 12 Aug 25 ta | 2 Feb-27 July |
| 308 | $19 \mathrm{Mar}-12 \mathrm{Sop}$ | 27 Sep | 351 | 3 July - 26 Dec 22 | 22 Jnu - 17 July |
| 804 | 8 Mar - 31 Aug | 22 Ftb | ${ }^{8} 54.4$ | 22 June - 16 Dec 1 | 11 Jau - 7 June |
| ${ }^{305}$ | 21 Aug | $10 \mathrm{Feb}-7 \mathrm{Aug}$ |  | 11 June - 6 Dec 2 | $\begin{aligned} & 28 \text { May } \\ & 16 \text { May - } 0 \text { Nav } \end{aligned}$ |
| 306 | 12 July (5) 2 July ${ }^{\text {d }}$ | 27 July | 3 3 85 3 | $20 \mathrm{Apr}-14$ Oct |  |
| 307 | $\left\{\begin{array}{c}5 \mathrm{Jau}-2 \mathrm{July} \\ 25 \mathrm{Dec}\end{array}\right\}$ | 16 July | 758 | 10 Apr - 3 Oct | ${ }^{26}$ Mar |
| 308 | 20 June - 14 Dec | 30 Nov | 379 | 11 Mar - 23 Sep | 13 Mar |
| 809 | 4 Nov | 25 May | 360 | 11 Aug | " ${ }^{\text {Aug }}$ |
| 310 | 30 Apr - 2 aj Oct | 16 May |  |  |  |
|  |  |  | 361 | 6 Feb - 3 Aug | 17 Aug |
| 311 | 19 Apr - 14 Oct |  | 362 | ${ }^{66} \mathrm{Jan}$ - 23 July |  |
| 812 | 8 Apr | 17 Sep | 163 | 16 Jan | 2 Jan |
| 913 | 27 Fub | 7 Sep | 464 | 1 Juno - 26 Nov | 16 June |
| 314 | $17 \mathrm{Feb}-12 \mathrm{Aug}$ | 3 Mar | 365 | 21 May - 15 Nov | 6 June |
| 315 | ${ }_{6} \mathrm{Feb}$ - 1 Aug | 18 July | 466 367 | 11 May - 4 Nov | 20 Oct <br> 15 Apr - 10 Oct |
| 816 817 |  | 6, duly - 31 Doc 20 Dec | 367 <br> 468 <br> 68 | 21 Mar - 19 Sep | $\begin{aligned} & 15 \mathrm{Apr}-10 \text { Oct } \\ & 3 \mathrm{Apr} \end{aligned}$ |
| 317 818 818 | 11 June - $6+$ Dec 91 | 20 Dec 16 May | 968 | 10 Mar - 2 Sep |  |
| 319 | $20 \mathrm{May}-14 \mathrm{Nor}$ | 6 May | 370 |  | 8 Ang |
| 320 |  | $25 \mathrm{Act}-180 \mathrm{ct}$ | 371 | 14 July | 2 Fob - 28 July |
| 321 | 30 Mar - 23 Sep | 8 Oot | 372 | $\{7 \mathrm{Jan}-2 \mathrm{July}\}$ | 22 Jau |
| 422 | 19 Mar - 12 Sep | 4 Mar |  | 1 26 Dec |  |
| 323 324 | ${ }_{22}^{1} \mathrm{Sep}$ | ${ }^{21} \mathrm{Ftb}$ | 873 374 | 21 june - 16 Dec | $27 \text { May - } 20 \text { Nov }$ |
| - 25 |  | 26 jury - 22 Dec | 37. | 2 Mny - 260 Oct | 10 Nov |
| 326 | $\left\{\begin{array}{c}\text { EJan-1 July } \\ 2 ; \mathrm{D} \text { - }\end{array}\right\}$ | 11 Dec | 776 377 | $20 \mathrm{ipr}-140 \mathrm{ct}$ $10 \mathrm{Apr}-30 \mathrm{ct}$ | 25, Mar |
| 327 |  | ${ }^{6}$ Tune | 378 |  | $15 \mathrm{Mar}-8 \mathrm{Sep}$ |
| 328 | 10 Map - 4 Nor | 2 2, ${ }^{\text {a }}$ | 789 380 | 17 Feb- 14 Aug | 28 Aug <br> 24 Jan |
| 329 | $29 \mathrm{Apr}-24 \mathrm{Oct}$ | 9 Oct | 380 | $7 \mathrm{Fob}-2 \mathrm{Aug}$ |  |
| 330 | $19 \mathrm{Apr}-13$ C'ot | 28 Sep | 981 | 26 Jau 7 | 12 Jan - 8 July |
| 431 | 10 Mar | ${ }_{25} \mathrm{Mar}$ | 782 | 12 June - 7 Dec | 27 June |
| 332 | 29 Feb - 22 Aug | 13 Mar | 387 | $1{ }^{1}$ Jnne - 26 Nov | $\begin{array}{ll}11 \\ 31 & \text { Nopt }\end{array}$ |
| 333 | 16 Feb-12 Aug | 23 July | 484 | 21 May - 14 Nov | 31 Oct |
| 334 | 1 Aug | 17 July | 385 786 |  |  |
| 335 | 22 June - 16 Doo | 11 Jan | 786 387 | $1 \mathrm{Apr}-24 \mathrm{Sep}$ $21 \mathrm{Mar}-14 \mathrm{Sep}^{\text {d }}$ ( | 30 Aug |
| 396 <br> 937 <br> 3 | 10 June - ${ }^{51}$ Das ${ }^{\text {Dos }}$ | 27 May 16 May | 387 <br> 388 <br> 88 | 21 Mar - $14 \mathrm{Sep}^{\text {Mar }} 2 \mathrm{Sep}$ | 18 Aug |
| \$38 | s1 May - 24 Nov | ${ }^{6} \mathrm{May}$ | 389 |  | 12 Feb |
| 839 | $10 \mathrm{Apr}-40 \mathrm{Ot}$ | 19 Oct | 390 | 17 Jau - 13 July |  |
| 340 | $30 \mathrm{Mar}-22 \mathrm{Sep}$ | 14 Mar |  |  |  |
| 341 | 19 Mar - 11 Sep | 4 Mar | 891 | $\left\{\begin{array}{c}7 \text { Jan -2 July } \\ 27 \text { Deo }\end{array}\right\}$ | 18 June |
| 342 | 3 Aug | 17 Aug | 392 |  | 20 June |
| 344 | 27 Jan - 23 July | 6 Aug | 394 | 12 May - 5 Nov | 20 Nor |
| 444 | 16 Jan - 12 July | 2 Jan - 21 Dec | 394 | 2 May - 25 Oct | 16 Apr 6 Apr |
| 345 | 4 Jau | 16 June | 995 | $21 \mathrm{Apr}-14$ Oct | 6 Apr |
| 846 347 | 21 May - 15 Nor | ${ }^{60}$ June | 396 397 |  |  |
| 347 348 | 11 May - 4 Nov $29 \mathrm{Apr}-23 \mathrm{Oct}$ | 20 Oot | 397 398 | 28 Feb - 14 Aug | 3 Feb |
| 349 | 21 Mar | 1 Apr | 489 | 7 Feb | 29 Jau - 10 July |
| 380 | 10 Mar - 2 Sep | 24 Mar | 400 | 22 Jane - 17 Deo | 8 July |

TABLE XVIII.-(Continued)
Last of Eclipses

| A D | Lunar | Solatt | A 1 | Lunar. | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 401 | 12 Tune - 6 Dec | 27 June | 4 I 1 | $2 \mathrm{Apr}-26 \mathrm{Sep}$ |  |
| 4021 | 1 June - 25 Nov | 11 Nov | $4 \times 2$ | $21 \mathrm{Mrr}-15 \mathrm{Sep}$ | 7 Mar |
| 403 |  | 7 May - 31 Oct | 4.5 | 11 Mar - 4 Sop | 24 Feb |
| $40+$ | 11 Apr - 4 Oct | 2 a Apr | 451 |  | $14 \mathrm{Ficb}-10 \mathrm{Aug}$ |
| 40 S | 31 Mar - 24 Sep | 15 Apt - 3 sep | 12: | $19 \mathrm{Jan}-15 \mathrm{July}$ | fol July |
| 406 407 | 20 Mar - 14 Sep | $6 \mathrm{Mar}-2^{9} \mathrm{Aug}$ $24 \mathrm{Feb}-19 \mathrm{Aus}$ | $4 \%$ | $\left\{\mathrm{gJan}_{2 / \text { - }{ }^{\text {dec }} \text { July }}\right\}$ | 13 Dec |
| 408 | $29 \mathrm{Jau}-9+$ July | 13Feb | 457 |  | 8 June - 3 Dee |
| 409 | 17 Jan - 13 July | 29.June | 4,8 | 14 May - 6 Nor | 28 Mry |
| 410 | 7 Jan | 18June - 12 Dee | 459 460 | $\begin{array}{r} 9 \mathrm{May}-27 \text { Oct } \\ 21 \mathrm{Apt}-16 \text { Oct } \end{array}$ | $\begin{aligned} & 18 \text { May }-12 \text { Oct } \\ & 30 \text { Sep } \end{aligned}$ |
| 411 | 23 May - 16 Nov |  |  |  |  |
| 412 | 12 May - ${ }^{4} \mathrm{Nov}$ | 27 Apr | 4.11 |  | $27 \mathrm{Mar}-20 \mathrm{scp}$ |
| 413 | 2 May - 26 Oct | 16 Apr | 462 | $2 \mathrm{Mar}-25 \mathrm{Ang}$ | 17 Mar |
| 414 |  | 6 Apr - 30 Sep | 463 | $19 \mathrm{Feb}-15$ Aug | 1 Aug |
| 415 | 11 Mar - 5 Sep | 19 Sep | 464 | 9 Fub - 9 Aug | 20 July |
| 416 | $28 \mathrm{Feb}-21$ Aug |  | 465 | 24 June - 18 Dec | 13 Jan - 9 July |
| 417 | 17 Feb - 13 Aug | 3 Feb | 460 | 14 June - 7 Deo | ${ }^{2} \mathrm{Jnn}$ |
| 418 | 29 Deo 18 Dec | 19 July | 447 | 3 Juna - 27 Nov | 19 May |
| 419 420 | 23 June - 18 Dec | 8 July - 3 Dee | 468 |  | ${ }_{21}^{81 \mathrm{May}}$ - 1 Nov |
|  |  |  | 4610 470 | 12 Apr $1 \mathrm{Apr}-26 \mathrm{Sop}$ |  |
| 421 422 | 22 Apr - 16 Oct | $\begin{aligned} & 17 \text { May } \\ & 6 \text { May } \end{aligned}$ |  | $22 \mathrm{Mar}-15 \mathrm{Sep}$ | 7 Mar |
| 423 | $12 \mathrm{Apr}-6$ Oct | 26 Apr | 471 | -2 Mar - 16 Sep | 20 Aug |
| 424 | 31 Mar - 21 Sep | 9 Sep | 475 | 30 Jan - 25 July | 9 ALg |
| 425 |  | 6 Mar - 29 Aug |  | $19 \mathrm{Jan}-15 \mathrm{July}$ | 4 J 3 n |
| 420 | 8 「eb - 1 Aug | 23 Feb | 40 | 8 Jan - 4 July | 19June |
| 427 | 29 Jan - 24 July | 10 July | 576 | 24 May - 17 Nov | 7 June |
| 428 | $18 \mathrm{Jan}-12 \mathrm{July}$ | 22 Dec | 477 | 13 May - 6 Nor | 28 May |
| 429 430 | ${ }_{2} 3$ June - 27 Nov | 12 ivec | 478 | 2 May - 27 Oct | 12 Oct |
| 430 | 23 May - 16 Nov |  | 479 400 | $12 \mathrm{Mar}-5 \mathrm{Sep}$ | $\begin{aligned} & 8 \mathrm{Apr}-10 c t \\ & 27 \mathrm{Mar} \end{aligned}$ |
| 431 432 | 13 May - 5 Nov | 27 Apr $16 \mathrm{Apr}-10$ Oct |  |  |  |
| 432 | 21 Mar - 15 Sep | 16 Apr - -10 Oct 29 Sep | $4 ¢ 3$ 482 | $2 \mathrm{Mar}-25 \mathrm{Aug}$ $19 \mathrm{Feb}-1+\mathrm{Aug}_{\mathrm{g}}$ | ${ }_{11}{ }^{\text {a }}$ Aug |
| 434 | 11 Mar - 4 Sep | 25 Feb | 483 | 6 July - 30 Dec | $2+$ Jan |
| 435 | 28 Feb - 24 Aug | 14 Feb | 484 | 24 June - 18 Dec | 14Jan |
| 436 |  | $3 \mathrm{Feb}-29 \mathrm{Jaly}$ | 445 486 | 14 June - 7 Deo | ${ }^{29} \mathrm{May}$ May - 12 Nov |
| 437 |  | $13 \mathrm{Dec}-19 \mathrm{July}$ | 487 | 23 Apr - 18 Oct | 1 Nov |
| 438 439 | 23 June - 17 Dec | 3 Deo | 488 | $12 \mathrm{Apr}-6$ Oct | 29 Mar |
| 449 448 | 3 May - 26 Oct | 17 May | 489 491 | $1 \mathrm{Apr}-25$ Sep | 18 Mar i Mar |
| 441 | $22 \mathrm{Apr}-16$ Oct | 6 May - 1 Oct | 491 | 10 Feb - 5 Ang | 21 Aug |
| 442 | $11 \Delta \mathrm{pr}-5$ Oct | 20 Sep | 492 | 30 Jan - 25 July | 15 Jan |
| 443 | $19 \mathrm{Feb}-14$ Aug | 17 Mar | 413 | 18 Jan - 15 July | 4 Jan |
| 4tt | $19 \mathrm{Feb}-14 \mathrm{Aug}$ |  | 44 | 5 June - 28 Nov | 19 June |
| 145 446 | $8 \mathrm{Feb}-3$ Aug | 20 July | 4 | 25 May - 18 Nov | 8 June - 3 Nov |
| 448 | 14 June - 24 - July | 10 July ${ }^{29}$ | $41 / 2$ | 13 May - 6 Nov | 22 Oot |
| 4 | 14 June - 86 Dec 3 June 26 Nor | 29 June - 23 Dec | 497 448 | $23 \mathrm{Mar}-16 \mathrm{Bep}$ | 18 Apr 7 Apr |
| 449 | 23 May - 16 Nov | 8 May | 490 | 13 Mar - 5 Sep | 22 Aug |
| 460 |  |  | 600 | 1 Mar - 25 Aug | 10 Aug |

TABLP XVIII-(Continued.)
Lust of Eclıpses


TABLE XVIII.-(Continaed.)
Lust of Eclupses

| A D | Lunar. | Solat. | AD | Lukam. | Bolar. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 601 | 24 Mar - 17 Sep | 10 Mar | 661 | 12 Jan - 8 Jaly | 27 Jan - 28 Juue |
| 602 |  | 22 Ang | 652 | 1 Jan - 27 June | 11 Juas |
| 603 | 1 Feb - 28 July | 12 Aug | 654 | 18 May - 10 Nov | 1 Juae - 28 Nov |
| 804 | 22 Jan - 16 J Jaly | $\left\{\begin{array}{c}7 \mathrm{Jan}-1 \mathrm{Ang} \\ 26 \mathrm{Dec}\end{array}\right\}$ | 854 605 | $\begin{aligned} & 7 \mathrm{May}-31 \text { Oot } \\ & 26 \mathrm{Apr}-21 \text { Oot } \end{aligned}$ | $12 \mathrm{Apr}$ |
| 805 | 11 Jan - 6 Joly | 22 June - 18 Deo | 656 |  | $31 \mathrm{Mar}-28 \mathrm{Bep}$ |
| 606 | 27 May - 20 Nov | 11 June | 657 | 5 Mar - 29 Ang | 13 Sep |
| 607 | 17 May - 0 Nov | 31 May - 26 Oct | 658 | 28 Feb - 18 Ang | 88 Feb - 8 Bep |
| 608 609 | 5 May - 29 Oct |  | 659 | $18 \mathrm{Feb}-8 \mathrm{Aag}$ |  |
| 609 610 | 1 SMar - 8 Sep | 10 Apr 30 Mar | 660 | 22 Deo | 18 Jan - 18 J aly |
| 611 | $4 \mathrm{Mar}-29 \mathrm{Agg}$ | 20 Mar | 661 | $\begin{array}{r} 18 \text { June - } 11 \text { Dec } \\ 7 \text { Jnne } \\ 1 \end{array}$ | 2 Juj y |
| 612 | $22 \text { Feb - } 17 \mathrm{Aug}$ | 2 Aug | 668 |  |  |
|  | \{ 1 Jan-27 Juce |  | 664 | 16 Apr - 10 Oct | 1 May |
| 614 | $\left\{\begin{array}{c}22 \mathrm{Deo} \\ 10\end{array}\right.$ |  | 665 666 | $5 \mathrm{Apr}-30 \mathrm{Nep}$ $26 \mathrm{Mar}-18 \mathrm{Sep}$ | $\begin{array}{r} 21 \mathrm{Apr} \\ 4 \mathrm{Sep} \end{array}$ |
| 615 616 | 16 June - 11 Deo | 5 Jan - 2 Jane | 667 | 26 Mar - 18 Sep | $28 \mathrm{Feb}-25 \mathrm{Ang}$ |
| 617 | ${ }^{5} 5 \mathrm{Jupo}$ | 21 Mny - 15 Nor 10 Mey - 4 Nap | 668 | $3 \mathrm{Feb}-29 \mathrm{Jaly}$ | 17 Feb |
| 818 | $15 \mathrm{Apr}-9 \mathrm{Oct}$ | $1 \mathrm{Mpr}-24 \mathrm{Oct}$ | 669 670 | 23 Jan - 18 July | 6 Feb |
| 619 620 | $4 \mathrm{Apr}-29 \mathrm{Sep}$ | 21 Mar $10 \mathrm{Mar}-2 \mathrm{Sep}$ | 670 | 12 Jan - 8 July | 23 June - 18 Deo |
| 621 |  |  | 671 | 22 Nov 17 May - 10 Not | 12 Jane - 7 Doc |
| 622 | 12 Fob - 88 Aug 1 Fob- 28 | 22 Aug 17 Jan - 12 Aug | 672 673 | 17 May - 10 Nov 6 May - 31 Oot | ${ }_{22} 2 \mathrm{Apt}$ |
| 823 | 22 Jan - 17 July | 27 Deo | 874 |  | $12 \mathrm{Apr}-8000$ |
| 624 | 8 Jnae- 30 Nov | 21 June | 675 | 17 Mar - OSep | 25 Sop |
| 625 | 27 May - 20 Nov | 10 Juae | 678 | 8 Mar - 29 Ang | 13 Sep |
| 626 | 17 May - 9 Nov | 28 Oct | 677 | 23 Feb-18Aug |  |
| 627 828 |  | $21 \mathrm{Apr}-15$ Oot | 678 |  | 23 Jan - 24 July |
| 828 829 | 25 Mar - 19 Sop 16 Mar - Sop | 10 Apr | 879 | $\left\{\begin{array}{c}2 \text { Jan-29 Jane } \\ 29 \text { De0 }\end{array}\right\}$ | 13 July |
| 630 | 4 Mar - 28 Ang | $13 \mathrm{Ang}$ | 880 | 17 June - 11 Deo | 27 Nov |
| 681 |  | 8 Ang | 881 | 7 June | $23 \mathrm{Mey-18}$ Nov |
| 632 | 18 Jan - 7 July | 27 Jau | 682 | 27 Apr - 22 Oot | 12 May |
| 688 | $\left\{\begin{array}{c}1 \text { Jan- } 27 \text { June } \\ 21 \text { Dec }\end{array}\right\}$ | 12 June | 688 684 | 18 Apr-11 Oot | 2 May |
| 834 | 18 June ${ }^{21}$ Deo | 1 June | 684 885 | 54 pr - 29 Sep | 14 Sep 4 Sep |
| 635 | 7 May - 31 Oct | 15 Nov | 886 | 14 Fob- 9 Aag | 28 Fob |
| 636 | $26 \Delta \mathrm{pr}-20$ Uot | ${ }_{11} \mathrm{Apr}-3 \mathrm{Nov}$ | 687 | 3 Feb - 80 July | 15 July |
| 687 | $15 \Delta \mathrm{pr}-9$ Oct | 1 Apr | 888 | 28 Jan - 18 July | 9 July - 28 Dec |
| 638 |  | 21 Mar | 089 | 2 Deo | 22 June - 17 Deo |
| 889 840 | ${ }_{23} \mathrm{Feb}-19 \mathrm{Aag}$ | 8 Sep | 690 | 28 May - 22 Nov | 6 Deo |
|  |  |  | 691 | $17 \mathrm{May} \text { - } 11 \mathrm{Nor}$ | ${ }^{8} \mathrm{MLay}$ |
| 641 | 12 Deo - 27 July | 17 Jgn 2 July | 692 698 | ${ }_{2}^{6} \mathrm{May}$ - 20 Sep | ${ }_{5}^{22} \mathrm{Apr}$ |
| 643 | 7 Jone - 1 Deo | 21 Jane | 694 | 17 Mar - 9 Sep |  |
| 644 | 27 May - 18 Nov | 6 Nov | 695 | $8 \mathrm{Mar}-29 \mathrm{Aug}$ | 19 Feb |
| 845 | 5 Apr - 30 Sop | $11 \mathrm{May}-250 \mathrm{ct}$ | 698 897 |  |  |
| 847 | 26 Mar -19 Sep | 18 Mpr 4 Sep |  | $\begin{aligned} & 18 \text { Jan }-9 \text { July } \\ & 29 \text { Jan- June } \end{aligned}$ |  |
| 648 | 14 Mar - 7 Sop | 24 Ang | 698 | $\left\{\begin{array}{c}22 \text { Deo }\end{array}\right\}$ | 18 July - 8 Deo |
| 649 650 | 23 Jan - 18 July | $\begin{aligned} & 17 \text { Fob }-13 \Delta \mathrm{ag} \\ & 6 \text { Feb } \end{aligned}$ | $\begin{aligned} & 698 \\ & 700 \end{aligned}$ | 18 June <br> 1 Nov | $\begin{aligned} & 8 \text { June - } 27 \text { Nov } \\ & 28 \text { May } \end{aligned}$ |

TABLEXVIII.-(Continued.)
List of Eclupses

| 4 D | Lumar. | Solat. | $\triangle$ D | Lusae | Solar. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 701 | $27 \mathrm{Apr}-1100 \mathrm{t}$ | 12 May | 751 | 15 Pab-11 Aug | 25 Aug |
| 702 | $16 \Delta \mathrm{pr}-10$ Oot | 26 Bep | 752 | + Feb-31 July | 14 Aug |
| 703 |  | 22 Mar | 753 | 24 Jau - 20 July | $9 \mathrm{Jan}-29$ Dee |
| 704 | 25 Fob - 19 Aug | 10 Mar | 754 | 4 Deo | 25.5 Jnne |
| 705 | 18 Fib - 9 Ang | 28 Feb - 28 July | 755 | 30 May - 23 Nov | 14 June |
| 706 | 2 Fob - 80 July | 14 July | 756 | 18 May - 11 Nov | 28 Oot |
| 707 | 18 Deo | 4 July - 29 Deo | 757 | 8 May | 29 Apr |
| 708 | 8 June - 2 Dea | 17 Deo | 758 | 29 Mar - 21 Sep | 12 Apr |
| 709 | 28 May - 22 Nov | 14 May | 759 | 18 Mar - 11 Sep | 2 Apr |
| 710 | 17 May | 3 May - 27 Oct | 760 | 6 Mar - 81 dug | 15 Ang |
| 711 | 7 Apr - 10 Oct | 16 Oth | 761 |  | $5 \mathrm{Ang}$ |
| 712 | 27 Mar - 19 Sep | 5 Oot | 762 | 15 Jan - 10 July | 30 Jan |
| 718 | 17 Mar - 9 Sop | ${ }_{19} 19 \mathrm{Par}$ Mar 15 Ang | 763 | $\left\{\begin{array}{c}4 \mathrm{Jun}-20 \mathrm{June} \\ 25 \text { Deo }\end{array}\right\}$ | 18 Jan - 16 June |
| 715 | $24 \mathrm{Jan}-21 \mathrm{July}$ | $4 \Delta \mathrm{ng}$ | 764 | 18 June | 4 Jone - 28 Nor |
| 716 | 18 Jan - 9 July | 23 Jnly | 765 | 9 Mry | 24 May |
| 717 | 2 Jan - 28 Jane |  | 768 | 29 Apr - 22 Oct | 7 Nor |
| 718 | 12 Nov | 3 June | 767 | $18 \mathrm{Apr}-120 \mathrm{ot}$ | 3 Apr |
| 719 | 8 May - 2 Nov | 24 Msy | 768 |  | 23 Mar 5 Sep |
| 720 | $27 \mathrm{Apr}-21$ Oot | 6 Oot | 769 | 25 Feb - 22 Ang <br> $14 \mathrm{Fob}-11 \mathrm{Aug}$ | 5 Sep 25 Ang |
| 721 | 7 Mar - 31 Aag | $\begin{aligned} & 1 \mathrm{Apr}-26 \mathrm{Sep} \\ & 21 \mathrm{Mar} \end{aligned}$ | 771 | 4 Feb - 81 July |  |
| 723 | $24 \mathrm{Fob}-20 \mathrm{Arg}$ | 11 Mar | 772 | 15 Deo | ${ }_{5} 5$ July |
| 72 l | 18 Feb - 9 Aug | 25 July | 773 | 9 June - 4 Deo | 24 June |
| 725 | 24 Doo 19 June - 13 Deo | 10 Jau - 14 July $88 \mathrm{Jan}-28 \mathrm{Dec}$ | 774 775 | 130 May - 23 Nov | 4 May - 29 Oot |
| 726 727 728 | 19 June - 13 Deo | ${ }^{85 \mathrm{Jan} \text { - } 28 \mathrm{Dec}}$ | 775 776 | 19 May - 2000 | 4 alay - 29 Oot |
| 728 | 27 May | $13 \mathrm{May} \mathrm{-} 6 \mathrm{Nov}$ | 777 | $28 \mathrm{Mar}-21 \mathrm{Bep}$ | 12 Apr |
| 729 730 | $18 \Delta \mathrm{pr}-11$ Oot | 27 Oot | 778 | $17 \mathrm{Mar}-11 \mathrm{Sep}$ | 28 Aug |
| 730 | $7 \Delta \mathrm{pr}-10 \mathrm{t}$ | 16 Oot | $\begin{array}{r} 779 \\ 780 \end{array}$ | 26 Jan - 21 July | 21 Feb -16 Aag <br> 10 Feb |
| 791 | $28 \mathrm{Mar}-20 \mathrm{Bep}$ | 12 Mar |  |  |  |
| 782 788 | 8 Fob - 81 July | 1 Mar - $25 \Delta \mathrm{ag}$ <br> 14 Ang | 781 | $15 \mathrm{Jan}-10$ July | 29 Jan - 26 Jane 15 June |
| 784 | $24 \mathrm{Jan}-20 \mathrm{July}$ | $\left\{\begin{array}{c}10 \mathrm{Jan} \\ 80 \mathrm{D} 00\end{array}\right.$ | 782 783 | 4 Jan - 29 June | 29 Nov |
| 785 | 13 Jan - 9 July | 19 Doc | 784 | 9 May - 2 Nov | 17 Nov |
| 786 | 25 Nov - July |  | 785 | $29 \mathrm{Apr}-22 \mathrm{Oot}$ | $\begin{aligned} & 18 \mathrm{Apr} \\ & 4 \mathrm{Apr}-27 \mathrm{Sep}\end{aligned}$ |
| 737 | 18 May - 12 Nov | 8 June | 786 787 | $8 \mathrm{Mar}-2 \mathrm{Bop}$ | 16 Bep |
| 738 738 | 8 Msy - 1 Nov | 18 Oot | 788 | 28 Feb - 21 Aug |  |
| 740 | 18 Mar - 10 Sep | 1 Apr | 789 790 | $\begin{aligned} & 14 \mathrm{Feb}-10 \mathrm{Ang} \\ & 26 \mathrm{Dea} \end{aligned}$ | $\left\lvert\, \begin{aligned} & 31 \mathrm{Jan} \\ & 20 \mathrm{Jan} \end{aligned}\right.$ |
| 741 | 7 Mar - 31 Aug |  |  | 20 June - 15 Deo | 6 July |
| 742 | $24 \mathrm{Feb}-20 \mathrm{Aug}$ | $\begin{array}{r} 8 \mathrm{Aug} \\ 30 \mathrm{Jan} \end{array}$ | 792 | 9 June - 3 Deo | 24 Juue - 19 Nov |
| 748 |  | 30 Jan | 798 | 30 May | 8 Nov |
| 744 | $\left\{\begin{array}{c}\text { Jan-29 June } \\ 24 \mathrm{Deo}\end{array}\right\}$ | 19 Jan | 794 | 13 Oot | ${ }^{4} \mathrm{M}$ May |
| 745 | 18 June - 18 Doo | 4 June | 795 796 | $\begin{array}{r} 9 \mathrm{Apr}-8 \text { Oot } \\ 28 \mathrm{Mar}-218 \mathrm{Bep} \end{array}$ | ${ }^{23} 8 \mathrm{Apr}$ |
| 748 | 8 Jane | 25 May - 7 Nay | 797 | 28 Mar - 21 Bop | 3 Mar |
| $7+7$ 748 | 29 Apr 18 Apr - 11 Oot | $\begin{aligned} & 14 \text { May - } 7 \text { Nov } \\ & 27 \mathrm{OOt} \end{aligned}$ | 798 | ${ }_{8} 8 \mathrm{Feb}$ - $1{ }^{1} \mathrm{Aug}$ | 20 Feb - 7 July |
| 749 | $7 \mathrm{Apr}-80 \mathrm{Sop}$ | 23 Mar | 799 800 | $26 \mathrm{Jau}-21 \mathrm{July}$ $16 \mathrm{Jan}-10 \mathrm{July}$ | 26 June 7 Jnly |
| 750 |  |  |  |  |  |

TABLT XVIII.-(Continued.)
Lust of Eclupses

| A. D | Lunar | Solar. | A D | Lunar. | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 801 |  | 15 Jane - 9 Deo | 851 | 19 Apr | 5 Apr |
| 802 | 21 May - 13 Nov | 29 Nov | 852 | 9 Mar | $24 \mathrm{Mar}-17 \mathrm{Sep}$ |
| 803 | 10 May - 2 Nov | 25 Apr | 853 | 27 Feb - 22 Aag | 13 Mar |
| 804 | 22 Oot | 13 Apr | 854 | 16 Feb - 12 Ang | 28 Jonly |
| $80 \overline{0}$ | 19 Mar - 12 Sep | ${ }^{8}$ April - 28 Sep | 855 |  | 17 July |
| 806 | ${ }_{26} \mathrm{Mar}-1 \mathrm{Sep}$ | 16 Sop | 856 | 22 Jane - 15 Deo | 11 Jan - 31 Deo |
| 8807 | $26 \mathrm{Feb}-21$ Aug | ${ }_{31}^{11 \mathrm{Feb}}$ - 27 July | 857 858 88 | 11 June - 51 Dec | 27 May |
| 809 | \{ $6 \mathrm{Jan}-1 \mathrm{Jaly}\}$ | 31 Jau - 27 July | 859 |  | 6 May - 29 Ot |
| 810 | ${ }_{20 \mathrm{Jan}}{ }^{25} \mathrm{Dec} \mathrm{Deo}^{\prime}$ | 6 Jnly - 30 Nov | 860 | 9 Apr - 3 Oot | 18 Oot |
| 811 | 10 Jane |  | 881 | $30 \mathrm{Mar}-22 \mathrm{sep}$ | 15 Mar |
| 812 | 23 Oct | 14 May | $862$ | 19 Mar - 11 Sep | 4 Mar - 29 Ang |
| 818 814 | $19 \mathrm{Apr}-13$ Oot | ${ }_{1}{ }^{4} \mathrm{May}$ | 868 | 27 Jau-22 July | 18 Aug <br> 6 Aug |
| 8814 | $8{ }^{8} \mathrm{Apr}$ - 3 Oot | 17 Sop | 864 868 | 15 Jan - 12 July | ${ }_{1}^{6}$ Jag - 21 Deo |
| 816 | 28 Mar - 11 Fob Aur | 78 cop 2 Mar | 866 | 26 Nov | 16 June |
| 817 | ${ }^{17 \mathrm{Feb}} \mathbf{6}$ - 31 Jag | 19 Fab | 867 | $22 \mathrm{May}-15 \mathrm{Nov}$ | 6 June |
| 818 | 26 Jan - 21 July | 7 July | 868 | 10 May - 4 Nor | 19 Oct |
| 818 | -- | 26 June | 869 870 | ${ }_{21}^{29} \mathrm{Apr}$ | 9 |
| 820 | 81 May - 23 Nov | 9 Deo | 870 |  |  |
| 821 | 20 May - 18 Nov | 6 May | 871 | 10 Mar - 2 Sep | 24 Mar |
| 822 | 9 May - 2 Nov | 26 Apr | 872 | 28 Feb - 22 Aug | 8 Ang |
| 823 | 24 Sep | 8 Oct | 873 | 12 Aug | 1 Feb - 28 Jnly |
| 824 | 18 Mar - 12 Sep | 26 Sep | 874 | 3 July - 26 Dee | 21 Jan - 17 July |
| 825 826 | 8 Mar - 1 Sep |  | 875 | 22 Jane - $16 \mathrm{D}_{\text {eo }}$ | 11 Jan - 7 June |
| 826 827 | 17 Jan - 12 July | $\begin{gathered} 7 \mathrm{Aug} \\ 27 \mathrm{July} \end{gathered}$ | 876 877 | 10 Jnde - 5 Dec | $\begin{aligned} & 27 \text { May } \\ & 9 \text { Nov } \end{aligned}$ |
| 828 | $\left\{\begin{array}{c}6 \mathrm{Jan}-1 \mathrm{July} \\ 25 \mathrm{Dec}\end{array}\right\}$ | 15 July | 878 | $20 \mathrm{Apr}-15$ Oct | 29 Oct |
| 829 | ${ }_{20} \mathrm{Jume}^{25 \mathrm{Dec}}$ | 90 Nov | 879 880 | ${ }_{30} 10 \mathrm{Apr}-4 \mathrm{Oct}$ | 26 Mar |
| 830 | 4 Nov | ${ }_{25} \mathrm{May}$ | 880 | - Mar 22 Sep | 14 Mar - Sop |
| 881 | $30 \mathrm{Apr}-24$ Oct | 15 May | 881 | $10 \mathrm{Feb}-13 \mathrm{Aqg}$ | 28 Ang |
| 882 | $18 \mathrm{Apr}-13$ Oot | 15 | 888 | ${ }^{7} 7 \mathrm{Feb}-{ }^{3} \mathrm{AOE}$ | 17 Aug |
| 831 834 | ${ }_{27}^{8} \mathrm{Fpr}$ | $25 \mathrm{Mar}-17 \mathrm{Sep}$ $14 \mathrm{Mar}-7 \mathrm{Sep}$ | 8884 | 16 Jan - 6 Dec | 2 Jan - 26 Jnue |
| 8888 | ${ }_{17} 7 \mathrm{Feb}$ - 12 Ang | ${ }_{14 \text { Mar - }}^{\mathbf{3} \text { Mar }} 7$ | 885 | 1 June-26 Nov | 16 June |
| 886 | 8 Feb-31 July | 17 July | 886 887 | ${ }^{21} \mathrm{May}$ - 15 Nav | 6 Jumo |
| 837 |  | $\left\{\begin{array}{c}10 \mathrm{Jan} \\ 31 \\ \text { Dec }\end{array}\right.$ | 887 888 | 11 May 31 Mar | $20 \mathrm{Act}-90 \mathrm{ct}$ |
| 838 | 11 June - 5 Die | 31 Dec | 889 | 21 Mar - 13 Sep | 4 Apr |
| 839 | 1 June - 24 Nov | 16 May | 890 | 10 Mar - 2 Sep | 19 Aug |
| 840 | 20 May - 13 Nov | 5 May - 29 Oat |  |  |  |
| 841 |  |  | 891 | 23 Ang | 12 Feb |
| 842 | $30 \mathrm{Mar}-23 \mathrm{Sep}$ | $25 \mathrm{Apr}-18$ |  | \{ 6 Jan-2 Jaly \} | 2 Fbb |
| 843 | 19 Mar - 12 Sep | 5 Mar | 893 | $\left\{\begin{array}{c}26 \text { Deo }\end{array}\right\}$ | 17 June |
| 844 845 | 27 Jan - 22 July | ${ }^{22} \mathrm{Feb}$ | 894 | 22 June - 16 Deo | $7 \text { June }$ |
| 846 | 16 Jan - 12 July | 27 July - 22 Deo | 8898 | 1 May - $25 \mathrm{Oct}^{\prime \prime}$ | 28 May - 20 Nov |
| 847 | 5 Jan - 2 Joly | 11 Deo | 887 | $20 \mathrm{Apr}-140 \mathrm{ct}$ | $\checkmark$ Apr |
| 848 | 14 Nov | ${ }^{5}$ June | 898 | $10 \mathrm{Apr}-8$ Oot | 26 Mar |
| 849 880 | $11 \mathrm{May}-4 \mathrm{Nov}$ $30 \mathrm{Apr}-24$ Oct | 25 May 9 Oct | 898 900 | 24 Aug | 15 Mar |

TABLE XVIII-(Continued)
Lust of Eclupses

| A D | Lonar. | Solar | A D | Lumaz | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 901 | 8 Fiob - 3 Ang | 29 Jan | 951 | 23 May - 16 Nor | 8 May |
| 902 | $26 \mathrm{Jan}-17$ Deo | 12 Jan - 8 July | 952 | 12 May - 4 Nov | 26 Apr |
| 003 | 12 June - 7 Deo | 27 June | 983 |  | 16 Apr |
| 904 | 81 May - 23 Nop | 16 June - 10 Nor | 984 | $22 \mathrm{Mar}-15 \mathrm{Sep}$ |  |
| 905 908 | 21 May |  | 985 | 11 Mar - 4 Sep |  |
| 908 907 | $1 \mathrm{Apr}-24$ | 26 Apr | 956 957 | 28 Feb | $14 \mathrm{Feb}-8 \mathrm{Aug}$ |
| 908 | 20 Mar - 24 Sop 20 Sep | 18 Apr 29 Aug | 958 | 18 Jau - 3 July |  |
| 909 | 2 Sep | 18 Ang | 958 | $\{28 \mathrm{Deo}$ | 19 July - 13 Deo |
| 910 | 24 Jnly | 12 Feb | $\begin{aligned} & 959 \\ & 960 \end{aligned}$ | 23 June | $\begin{array}{r} 2 \mathrm{Deo} \\ 28 \text { May } \end{array}$ |
| 911 | 17 Jan - 14 July $\{7 \mathrm{Jan}-2 \mathrm{July}$ | 2 Feb |  |  |  |
| 912 | $\left\{\begin{array}{c}7 \mathrm{Jnn}-2 \mathrm{Jnly} \\ 26 \mathrm{DeO}\end{array}\right\}$ | 17 June | 961 | $9 \mathrm{May}-26 \mathrm{Oct}$ $22 \mathrm{Apr}-16$ Oct | $\begin{array}{r} 17 \text { May } \\ 1 \text { Oot } \end{array}$ |
| 819 |  | 7 Junt | 963 | 11 Apr - 5 Oot | 20 Sop |
| 914 | 12 May - 5 Nor | 20 Nov | 964 |  | th Mar |
| 915 | 2 May - 25 Oot | $17 \Delta \mathrm{pr}$ | 965 | 18 Feb - 15 A ag | 8 Mar |
| 916 | $20 \mathrm{Apr}-130 \mathrm{ct}$ | ${ }^{5} \mathrm{Apt}$ | 966 | 8 Feb - 4 Aug | 20 Juk |
| 917 |  | 19 Sop | 967 | 28 Jmb | 10 July |
| 918 | $28 \mathrm{Feb}-24$ Oct | 8 Sep | 968 | 11 June - 7 Dee | 22 Deo |
| 918 | 17 Fob - 14 Aug | 9 Feb | 969 | 3 June - 26 Nov | 19 May |
| 920 | $7 \mathrm{Feb}-28$ Dec | $24 \mathrm{Jan}-18 \mathrm{July}$ | 970 | 23 May - 15 Nov | 8 May |
| 921 | 23 June - 17 Dec | 8 July | 371 |  | $27 \mathrm{Apr}-22$ Oct |
| 922 | 12 June - 7 Deo | 27 June - 21 Nov | 972 | $1{ }^{1}$ Apr - 25 Sep | 10 Oct |
| 923 | 1 June | 11 Nov | 973 | 21 Mar - 15 Sop | 7 MaF |
| 924 |  | 6 May | 974 | 11 Mar - 4 Sep | $25 \mathrm{Feb}-2 . \mathrm{Alg}$ |
| 925 | $11 \mathrm{Apr}-4$ Oot | 28 Apr | 975 |  | 10 Aug |
| 926 927 | $1 \mathrm{Apr}-24 \mathrm{Sep}$ | 10 Sep | 976 | 19 Jan - 14 Jnly | 29 July |
| 927 | 14 Sep | ${ }_{6} \mathrm{Mar}$ - 30 Ang | 977 | $\left\{\begin{array}{c}8 \mathrm{Jan}-\mathrm{T} \text { July }\end{array}\right\}$ | 13 Deo |
| 928 | 4 Aug |  | 977 | $\{28$ Dec $\}$ |  |
| 929 | 27 Jun - 24 July | 12 Feb | 978 |  | 8 June |
| 930 | 17 Jan - 13 July | 29 June | 979 980 | $\begin{array}{r} 14 \text { May - } 6 \text { Nov } \\ 3 \mathrm{May}-26 \text { Oot } \end{array}$ | $\begin{aligned} & 28 \mathrm{May} \\ & 17 \mathrm{May} \end{aligned}$ |
| 931 | 7 Jan | 18 June - 12 Deo |  |  |  |
| 932 | 22 May - 16 Nov | 30 Nov | 981 | $22 \mathrm{Apr}-16$ Oct | 30 Sep |
| 933. | 12 May - 5 Nov | 27 Apr | 992 |  | 28 Mar - 20 Bep |
| 934 | 2 May - 25 Oct | $16 \mathrm{Apr}-11000$ | 983 | $1 \mathrm{Mar}-26 \mathrm{Aug}$ | 17 Mar |
| 935 |  | 8 Apr - 30 Sep | 984 | 19 Feb - 14 Aug | 90 July |
| 936 | 11 Mar - 4 Sop | 18 Sep | 985 | $8 \mathrm{Feb}-3$ Aug | 20 July |
| 937 938 | 28 Feb - 24 Aug | 13 Feb | 986 | 24 June - 19 Deo | 1d Jan |
| 938 939 | 17 Feb ${ }_{\text {dan }} \mathbf{4}$ July $\}$ | 3 Feb | 987 988 | 2 June- 26 Nor | 18 May |
| 939 | $\left\{\begin{array}{c}\text { Jau-4 July } \\ 29 \text { Deo }\end{array}\right\}$ | 19 July | 989 | 2 Jun- 26 Nop | 8 May - 1 Nor |
| 940 | 22 Jnne - 17 Deo | 8 Jaly | 990 | 12 Apr - 7 Oct | 2) Oct |
| 941 | 12 Jnue | 21 Nov | 991 | $1 \mathrm{Apr}-26 \mathrm{Sep}$ | $18 \mathrm{Mar}-10$ Oat |
| 942 |  | 17 May - 11 Nor | 992 | 21 Mar - 14 Sep | 7 Mar |
| 913 | $23 \mathrm{Apr}-16$ Oct | 7 May | 993 |  | 24 Fob - 20 Aug |
| 944 | $11 \mathrm{Apr}-4$ Oot | $25 \mathrm{Apr}-20 \mathrm{Sep}$ | 094 | 30 Jan - 25 July | 9 Aug |
| 945 | 24 Sep | 18 Mar - 9 Sep | 993 | 19 Jan - 14 July | 4 Jan |
| 946 947 |  | 6 Mar - 29 Ang | 996 997 | ${ }_{8}^{8} \mathbf{8}$ Jan May - 17 Nov |  |
| 947 948 | ${ }_{28}^{8 \mathrm{Feb} \text { Jan - } 23}{ }^{4} \mathrm{Jug}$ Jug | 9 July | 997 998 | $24 \mathrm{May}-17 \mathrm{Nov}$ | ${ }_{28}{ }^{7}$ Mnnay - 23 Oot |
| 949 | 17 Jan | 28 June - 22 Deo | 999 | 3 May -27 Oot | 12 Oot |
| 950 | 3 June - 27 Nov | 12 Dec | 1000 |  | $7 \mathrm{Apr}-\mathrm{B0} \mathrm{Sep}$ |

## TABLIXVIII-(Continued.)

Lust of Eclipsea

| AD | Lunam | Solar | A D | Lurar | Solaz. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1001 | $12 \mathrm{Mar}-5 \mathrm{Sep}$ |  | 1051 | 26 June - 20 Deo | $15 \mathrm{Jan}-10 \mathrm{Jnly}$ |
| 1002 | $1 \mathrm{Mar}-25 \mathrm{Ang}$ | 11 Ang | 1052 | 15 Jude - 8 Dec | 29 Jane - 24 Nov |
| 1008 | $18 \mathrm{Feb}-14 \mathrm{Aug}$ | 91 July | 1053 | 4 June - 28 Nov | 16 Nov |
| 100 | 4 July - 29 Deo | 24 Jen - 20 Jaly | 1054 |  | 10 May |
| 1005 | 24 June - 16 Deo | 13 Jan | 1058 | $14 \mathrm{Apr}-8$ Oct | ${ }^{29}$ Apr |
| 1006 | 7 Deo | 29 May | 1056 | $2 \mathrm{Apr}-26 \mathrm{Sep}$ | 12 Sep |
| 1007 1006 | $29 \mathrm{Apr}-17$ Oct | 19 May | ${ }_{1057}^{1058}$ | $23 \mathrm{Mar}-15 \mathrm{Sep}$ | $25 \mathrm{Feb}-22 \mathrm{Ang}$ |
| 1009 | $12 \mathrm{Apr}-6$ Oct | 29 Mar | 1059 | $81 \mathrm{Jan}-27 \mathrm{~J} \mathbf{1} \mathrm{y}$ | 15 Feb |
| 1010 | $1 \mathrm{Apr}-26 \mathrm{Bep}$ | 18 Mar | 1060 | 20 Jan - 16 Jnly | S0 June |
| 1011 |  | 7 Mar - 81 Ang | 1061 | 8 Jam | 20 June |
| 1012 | $10 \mathrm{Fob}-4 \mathrm{Aug}$ | 20 Aug | 1062 | 25 May - 19 Nov |  |
| 1013 | 29 Jen - 25 Jniy | 14 Jan | 1063 | 15 May - 8 Nov | 1 May |
| 1014 | 19 Jan - 14 July | 4 Jan - 80 Jnae | 1084 | 3 May - 28 Oct | 19 Apr |
| 1015 | 5 June - 28 Nov | 19 Jnne | 1085 |  | 8 Apr |
| 1018 | 2t May - 17 Nov | 7 June - 2 Nor | 1086 | 14 Mar - 6 Sep | 22 Sep |
| 1017 | $13 \mathrm{May}-6 \mathrm{Nov}$ | 22 Oct | 1067 | 3 Mar - 27 Aag | 16 Fab |
| 1018 |  | 18 Apr | 1088 | 21 Fab - 15 Aug | 6 Feb |
| 1019 | $23 \mathrm{Mar}-16 \mathrm{Sep}$ | 21 Aug | 1060 | 7 Jaly - 90 Doo | 21 July |
| 1020 | 12 Max - 4 Sep |  | 1070 | 28 June- 20 Deo | 10 July - 8 Doo |
| 1021 | 1 Mar - 25 Ang | 11 Aug | 1071 | 15 June - 9 Deo | 24 Nov |
| 1022 | 18 Jnly | 81 Jnly | 1072 |  | 20 May |
| 1023 | $\left\{\begin{array}{c}\theta \mathrm{Jau}-\mathrm{D}_{\text {co }} \mathrm{July} \\ 29 \mathrm{D}\end{array}\right\}$ | 24 Jun | 1073 1074 | 24 $14 \mathrm{Apr}-18$ 14 Act 7 | ${ }^{9} \mathrm{May}$ |
| 1024 | 24 June - 18 Dec | 9 Jupe | 1074 1075 |  | 28 Apz 13 Bep |
| 1025 |  | $29 \mathrm{May}-29 \mathrm{Nor}$ | 1076 |  | 18 Sop |
| 1026 | 4 May - 28 Oct | 12 Nor | 1077 | $10 \mathrm{Fab}-6 \mathrm{Ang}$ | 25 Feb |
| 1027 | $23 \mathrm{Apr}-18$ Oot | $9 \mathrm{Apr}-1$ Nov | 1078 | 80 Jan - 27 July | 11 July |
| 1026 | $12 \mathrm{Apr}-6$ Oot | 28 Maz | 1078 | 20 Jan | 1 July - 26 Deo |
| 1029 | 20 Feb- 16 | 11 Sep | 1080 | 5 June - 29 Nov | 20 Jone - 14 Deo |
|  |  |  | 1081 | 25 May - 19 Nor | 8 Deo |
| 1091 | $10 \mathrm{Feb}-5 \mathrm{Aug}$ |  | 1082 | 14 May - 8 Nov | 80 Apr |
| 1082 | 90 Jan - 25 July | 15 Jan - 10 July | 1063 |  | 14000 |
| 1083 | 15 June - 6 Deo | 4 Jan - 29 Jana | 1064 | $24 \mathrm{Mar}-16$ Sop | 2 Oot |
| 1034 | 4 Jone - 26 Nov | 18 June | 1085 | $14 \mathrm{Mar}-6 \mathrm{Sep}$ |  |
| 1048 1038 108 | 24 May - 18 Nov |  | 1088 | $3 \mathrm{Mar}-2740 \mathrm{y}$ | 16 Fob |
| 1037 | 2 Apr - 27 Sep | 16 Apr |  | \{11 Jan-6 July $\}$ | 20 Julg |
| 1068 | $23 \mathrm{Mar}-16 \mathrm{Sep}$ | $1 \text { Sep }$ | 1088 | $\{90$ Deo $\}$ | 20 July |
| 1089 1040 | 13 Mar - 6 Sep | 22 Aug <br> 15 Feb | $\begin{aligned} & 1089 \\ & 1090 \end{aligned}$ | 25 June - 20 Dec | 24 Nov |
| 1041 | 20 Jan - 16 July | - | 1091 | 5 May - 30 Oot | 21 May |
| 1042 | 19 Jan - 5 July | 20 June | 1092 | $21 \mathrm{Apr}-16$ Oct | 9 May |
| 1042 | [ 28 Deo \} | 20 June | 1093 | 14Apr - 7 Oot | 23 Sep |
| 1043 | 14 May - 8 Nov | $\begin{aligned} & \theta \text { Jnne }-4 \text { Deo } \\ & 22 \text { Nov } \end{aligned}$ | 1094 1095 | $22 \mathrm{Feb}-18 \mathrm{Ang}$ | 19 Mar |
| 1045 | 6 May - 28 Oot | $19 \mathrm{Apr}-11$ Nor | 1096 | 11 Feb-6 Aug | 22 Joly |
| 1046 | $26 \mathrm{Apr}-17$ Oot | ${ }^{9} \mathrm{Apr}$ | 1097 | 30 Jan - 27 July |  |
| 1047 1048 10 |  | $\begin{aligned} & 29 \mathrm{Mar}-22 \mathrm{Sep} \\ & 10 \mathrm{Sep} \end{aligned}$ | 1098 | 11 Deo | $\left\{\begin{array}{c} 5 \mathrm{Jan}_{25}-1 \mathrm{July} \\ 25 \mathrm{Deo} \end{array}\right.$ |
| 1040 1060 | $\begin{array}{r} 20 \mathrm{Feb}-15 \Delta u g \\ 9 \mathrm{Feb}-84 u g \end{array}$ | ${ }_{8} 8 \mathrm{Fob}$ | $\left\lvert\, \begin{aligned} & 1009 \\ & 1100 \end{aligned}\right.$ | $\left\{\left.\begin{array}{c} 5 \mathrm{Juno}-80 \mathrm{Nov} \\ 28 \mathrm{Maj}-18 \mathrm{Nor} \end{array} \right\rvert\,\right.$ | 11 Maj |

FABLEXVIII.-(Continued.)
Lust of Eclupses

| A.D | Lunas | Solar | A D | Lunar | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11101 |  | $30 \mathrm{Apr}-240 \mathrm{ct}$ | 11151 | $4 \mathrm{Mar}-28 \mathrm{Aug}$ | 19 Aug <br> $7 \mathrm{Feb}-2 \mathrm{Aug}$ |
| 1108 | $8 \mathrm{Apr}-28 \mathrm{Sep}$ $25 \mathrm{Mar}-17 \mathrm{Sep}$ | 10 Mar | 1153 | 12 Jan - 7 July | $26 \mathrm{Ja口}$ |
| 1104 | 13 Mar - 6 Sep |  | 1154 | $\left\{\begin{array}{c}1 \mathrm{Jan}-27 \mathrm{June}\end{array}\right\}$ | 12 June |
| 1105 | Jul | 16 Feb | 11 | ${ }_{16 \text { June }}^{\text {21 Dec }}$ | $1 \mathrm{June}-26 \mathrm{Nov}$ |
|  | 111 Jan-6July |  | 1156 | 7 May - 30 Oct | 21 May |
| 1107 | \{ 31 Deo | 16 Dec | 1167 | $26 \mathrm{Apr}-19$ Oct | 11 Apr - 4 Nor |
| 1108 | 25 Juae | 11 June | 1188 | $15 \mathrm{Apr}-9$ Oot |  |
| 1109 | $16 \mathrm{Mer}-9 \mathrm{Nov}$ | ${ }^{1} 1 \mathrm{Mny}$ | 1159 |  | ¢1 Mar |
| 1110 | 8 May - 29 Oct | 20 May - 15 Oot | 1160 | 18 Feb - 18 Ang | 2 Bep |
| 1111 | $15 \mathrm{Apr}-1800 \mathrm{t}$ |  | 1161 | 12 Feb - 7 Ang | 28 Jan |
| 1112 |  | $29 \mathrm{Mar}-22 \mathrm{Sep}$ | 1162 | 1 Feb - 27 July | 17 Jan |
| 1114 | $4 \mathrm{Mar}-28 \mathrm{Aug}$ | 19 Mar | 1163 | 18 June- 12 Deo | 6 Jan - 3 Jury |
| 1114 | $21 \mathrm{Feb}-18 \mathrm{Aag}$ | 2 Aug | 1164 | 6 Juae- 90 Nor | 21 June - 16 Nov |
| 1115 | 10 Feb - 7 Aug | 23 July | 1165 | $27 \mathrm{May}-19 \mathrm{Nov}$ |  |
| 1116 | 21 Dec |  | 1166 |  | $\begin{aligned} & 1 \mathrm{May} \\ & 21 \mathrm{Apr} \end{aligned}$ |
| 11117 | $\begin{array}{r} 16 \text { Juae - } 11 \mathrm{Deo} \\ 8 \text { June - } 80 \mathrm{Nev} \end{array}$ |  | 1167 1168 | $6 \mathrm{Apr}-\mathrm{go} \mathrm{Sep}$ $25 \mathrm{Mar}-19 \mathrm{Sep}$ | ${ }^{21} \mathrm{Apr}-8 \mathrm{Sep}$ |
| 111 |  | ${ }^{11} \mathrm{May}$ | 1169 | $14 \mathrm{Mar}-8 \mathrm{Sep}$ | 24 Aug |
| 1120 | $15 \mathrm{Apr}-8$ Oct | 24 Oct | 1170 |  |  |
| 1121 | Apr -28 Sep | 20 Mar - 13 Oct | 117 | $23 \mathrm{Jan}-18 \mathrm{July}$ |  |
| 1122 | $24 \mathrm{Mar}-17 \mathrm{Sep}$ | 10 Mar | 1172 | 13 Jan - 27 Juge | 27 Jau - 23 June |
| 1129 1124 |  | 22 Aug | 1174 | 18 May - 270 Juae | 12 June - 26 Nor |
| 1124 1125 | ${ }^{1} \mathrm{Feb}-28 \mathrm{July}$ | ${ }^{11} 6{ }^{\text {Jang }}$ - 26 Dec | 1175 | 7 May - 81 Oot | 15 Nov |
| 1126 | 11 Jan - 6 July | 22 Juae | 1176 | $25 \Delta \mathrm{pr}-19$ 0ct | 11 Apr |
| 112 | 27 May - 20 Nov | 11 June | 1177 |  | 29 Sep |
| 1128 | 16 May - 8 Nov | $30 \mathrm{May} \mathrm{-} 2500 \mathrm{t}$ | 1178 | 5 Mar - 30 Ang | 14 Spp 8 |
| 1128 | 8 May - 29 Oot | 150 ct | 1179 | $28 \mathrm{Feb}-19 \mathrm{Aug}$ | $8 \mathrm{Feb}-8 \mathrm{Sop}$ |
| 1180 |  | 4 Oot | 1180 | 13 Feb - 7 Aug | 28 Jen |
| 1181 | 18 Mar - 8 Sep | 80 Mar | 1181 | 22 Dec | 17 Jau - 13 July |
| 1182 | 9 Mar - 28 Arg | 19 Mar | 1189 | 18 June - 11 Deo | 2 July |
| 1183 | 21 Feb - 17 Aug | 2 Aug | 1183 | 7 June - 1 Deo | 17 Nov |
| 1184 |  | 27 Jan - 28 Jaly | 1184 |  |  |
| 1188 | $\left\{\begin{array}{c}1 J_{2 \pi}-27 \text { June } \\ 22 \text { Deo }\end{array}\right\}$ | 16 Jan | 1185 |  | 1 May 21 Apr |
| 1136 | 15 June - 10 Dec | 5 Jea - 1 June | 1187 | 26 Mar - 19 Sep | 4 Sep |
| 1187 | 8 June 20 Oot | $21 \text { May - } 16 \text { Nov }$ | 1188 |  | 29 Feb- 24 Arg 17 Feb |
| 1138 | 26 Apr 16 Apr 20 9 | 4 Nor | 1189 1180 | 9 Feb- 29 July $23 \mathrm{Jan}-18 \mathrm{July}$ | ${ }^{17} 6 \mathrm{Feb}$ - 4 July |
| 1139 | $\begin{array}{r} 16 \mathrm{Apr}-9 \text { Oct } \\ 4 \mathrm{Apr}-28 \text { Sep } \end{array}$ | 20 Mar | 1180 | 23 Jan - 18 July | 6 Feb - 2 Jaly |
| 1141 |  | 10 Mar - 2 Eep | 1191 | $12 \mathrm{Jau}-8 \mathrm{July}$ $28 \mathrm{May}-21 \mathrm{Nov}$ | $\begin{aligned} & 29 \text { Juae - } 18 \text { Deo } \\ & 11 \text { June - } 6 \text { Deo } \end{aligned}$ |
| 1142 | 12 Feb-8Aug |  | 1193 | 18 May - 10 Nov |  |
| 1149 | $1 \mathrm{Feb}-28 \mathrm{July}$ | 12 Aug | 1194 | 7 May - 31 Oct | $22 \mathrm{Apr}$ |
| 1144 | 2 an - 16 July | 6 Jan - 26 Dec | 1198 |  | $12 \mathrm{Apr}-8$ Oct |
| 1145 | ${ }^{6} \mathrm{Jan}$ - 1 Deo | 22 Juae 11 Juae - 6 Nov | 1195 | $16 \mathrm{Mar}-9 \mathrm{Sep}$ |  |
| 1146 | 27 May - 20 Noy $17 \mathrm{May}-9 \mathrm{Nor}$ | 11 June - 6 Oct Nov | 1197 1198 | $8 \mathrm{Mar}-29 \mathrm{Aug}$ $23 \mathrm{Feb}-18 \mathrm{Aug}$ | 18 Sep |
| 1148 |  | $20 \mathrm{Apr}-14$ Oot | 1199 |  | 28 Jan - 24 July |
| 1149 1150 | $28 \mathrm{Mar}-19 \mathrm{Sep}$ $16 \mathrm{Mar}-8 \mathrm{sep}$ | 9 Apr 24 Aug | 1200 | $\left\{\begin{array}{c}3 \text { Jan-28June } \\ 22 \text { Deo }\end{array}\right\}$ | 12 Jaly - 8 Deo |

TABLIXVIII.-(Continued.)
List of Eclupses

| A D | Lunam | Solar. | AD | Lunae | Soung. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1201 | 18 June - 11 Deo | 27 Nov | 1251 | $7 \mathrm{Apr}-10 \mathrm{ot}$ | 16 Oct |
| 1202 |  | 23 May | 1252 | 27 Mar - 10 Sept | 11 Mar |
| 1208 | 27 Apr - 22 Oct | 12 May | 1253 |  | $1 \mathrm{Mar}-25 \mathrm{Ang}$ |
| 1204 | 16 Apr - 10 Oct | 1 May | 1254 | $4 \mathrm{Feb}-31 \mathrm{July}$ | 14 Aug |
| 1205 | 5 Apr - 29 Sep |  | 1255 | 24 Jan - 20 July | 10 Jan - 20 Deo |
| 1206 |  | 11 Mar - 4 Sep | 1286 | 13 Jan - 9 July | 16 Deo |
| 1207 | $14 \mathrm{Feb}-9 \mathrm{Aug}$ | 28 Fab | 1257 | 23 Nov | 18 June |
| 1208 | 3 Feb - 29 July | 14 July | 1258 | 18 May - 12 Nov | 3 June |
| 1209 | $22 \mathrm{Jan}-18$ July | 3 July - 28 Dec | 1259 | 8 May -1 1 Nor |  |
| 1210 | 9 June - 2 Dec | 17 Deo | 1260 |  | $12 \mathrm{Apr}-6$ Oct |
| 1211 | 29 May - 22 Nov |  | 1261 | 18 Mar - 10 Bep | 1 Apr |
| 1212 | 17 May - 10 Nov | 2 Maj | 1262 | ${ }_{2} \mathrm{Mar}^{-31} \mathrm{Ang}$ |  |
| 1213 | $27 \mathrm{Mar}-20 \mathrm{Sep}$ | ${ }^{22} \mathrm{Apr}$ | 1263 | 24 Fob - 20 Aug | $\begin{array}{r} 5 \mathrm{Aug} \\ 90 \mathrm{Jan} \end{array}$ |
| 1215 | $17 \mathrm{Mar}-9 \mathrm{Sop}$ | 2 Mar |  | \{3 Jan-30June $\}$ |  |
| 1216 | 5 Mar - 28 Aug | 19 Feb | 126 | $\{24 \mathrm{Dec}$ | 19 Jan |
| 1217 |  | 7 Fob - 4 Aug | 1266 | 19 June - 13 Dea | 8 Jan - 4 June |
| 1218 | 18 Jan - 9 July | 24 July - 19 Deo | 1267 | 8 Jnne | 25 May |
| 1218. | $\left\{\begin{array}{c}2 \mathrm{Jan}-29 \text { June } \\ 22 \mathrm{Dec}\end{array}\right\}$ |  | $\begin{aligned} & 1268 \\ & 1269 \end{aligned}$ | $\begin{aligned} & 28 \mathrm{Apr}-22 \text { Oct } \\ & 18 \mathrm{Apr}-11 \text { Oot } \end{aligned}$ | 13 May - 6 Nor |
| 1220 |  | 2 June | 1270 | $7 \mathrm{Apr}-30 \mathrm{Sep}$ | 23 Mar |
| 1221 | 8 May - 1 Nor | 23 May | 1271 |  | $12 \mathrm{Mer}-6 \mathrm{Sep}$ |
| 1222 | $27 \mathrm{Apr}-22 \mathrm{Oct}$ | 12 May - 600 t | 1272 | 15 Fob - 10 Ang | 25 Aug |
| 1223 | $16 \mathrm{Apr}-11$ Oct | 26 Bep | 1273 | 8 Feb - 31 July | $20 \mathrm{Jan}-14 \mathrm{Ang}$ |
| 1224 | 24 Feb - 19 Aug | 21 Mur | 1274 | $\left\lvert\, \begin{aligned} & 23 \text { Jan - } 20 \text { July } \\ & 4 \mathrm{Dec}\end{aligned}\right.$ | 25 June |
| 1228 | 14 Feb - 9 Aug | 28 Feb-25 July | 1276 | 29 May - 23 Nov | 19 June |
| 1227 | $3 \mathrm{Feb}-30 \mathrm{July}$ | 15 July | 1277 | 18 May - 12 Nor | 28 Oct |
| 1228 | 12 Deo | 3 July - 28 Deo | 1278 | 8 May | 23 Apr |
| 1229 | 8 June - 2 Deo |  | 1279 | $29 \mathrm{Max}-21 \mathrm{Sep}$ | 12 Apr |
| 1230 | 28 May - 22 Nov | 14 May | 1280 | $18 \mathrm{Mar}-10 \mathrm{Sep}$ | 1 Apr |
| 1281 |  | 3 May - 26 Oct | 1281 | 7 Mar - 31 Aug | 15 Aug ह Aug |
| 1238 | $\begin{array}{r} 6 \mathrm{Apr}-1 \text { Oot } \\ 27 \mathrm{Mar}-20 \text { Sep } \end{array}$ | $\begin{array}{r} 15 \text { Oct } \\ 5 \text { Oot } \end{array}$ | 1283 | 14 Jan - 11 July | $30 \mathrm{Jan}$ |
| 1284 | 17 Mar - 9 Sep | 1 Mar | 1284 | $\left\{\begin{array}{c}4 \text { Jan-29 June } \\ 24 \text { Deo }\end{array}\right\}$ | 19 Jan - 15 June |
| 1285 |  | $19 \mathrm{Feb}-15 \mathrm{Ang}$ | 1285 | 18 June |  |
| 1288 | 24 Jan - 20 July | 8 Ang | 1286 | 9 May - 2 Nov | $17 \mathrm{Nov}$ |
| 1237 | 12 Jan - 92 July | 19 Dte 8 Deo | 1287 | $29 \Delta \mathrm{pr}-22$ Oot | 7 Nov |
| 12388 | 12 Nav - 29 J une | 8 Deo | 1288 | 18 Apr - 11 Oot | 2 Apr |
| 1240 | 7 May - 1 Nov | 23 May | $\left.\begin{aligned} & 1269 \\ & 1290 \end{aligned} \right\rvert\,$ | $25 \mathrm{Feb}-22 \Delta u g$ | $\begin{aligned} & 23 \text { Mar - } 18 \text { Sep } \\ & \text { \$ Sep } \end{aligned}$ |
| 1241 | $27 \mathrm{Apr}-21$ Oct | 6 Oot | 1291 | 14 Feb - 11 Aug | 25 Ang |
| 1242 1243 |  | 20 Sep | 1292 | ${ }_{15} 4$ Feb- ${ }^{\text {Deo }} 30 \mathrm{July}$ | $21 \mathrm{Jan}-5 \mathrm{Jaly}$ |
| 1244 |  | $10 \mathrm{Mar}-8 \mathrm{Alg}$ | 1294 | ${ }_{9} 9$ June - 4 Deo | 25 June |
| 1245 | $13 \mathrm{Feb}-8 \mathrm{Aug}$ | 25 July | 1295 | 30 May - 23 Nov | 8 Nor |
| 1246 | 24 Dec | 19 Jan - 14 July | 1296 | 18 May | 28 Oct |
| 1247 | 19 June - 13 Dec | 8 Jan | 1297 | ${ }_{9} \mathrm{Apr}-2$ Oot | 23 Apr |
| 1248 | 7 June - 2 Dec | 24 May | 1298 | $29 \mathrm{Mar}-21 \mathrm{Sep}$ | 12 Apr |
| 1249 | 28 May <br> $18 \mathrm{Apr}-12$ Oot | 14 May - 6 Noy | 1299 | 18 Mar - 11 Sep | $\begin{aligned} & 27 \mathrm{Ang} \\ & 21 \mathrm{Frob}-15 \mathrm{Avg} \end{aligned}$ |

TABLEXVIII.-(Continued)
List of Eclupses

| A. ${ }^{\text {D }}$ | Lunar | Solar | A D | Lunar | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1301 | 25 Jan - 21 July | ${ }^{9} \mathrm{Fcb}$ | 1351 | $\begin{aligned} & 4 \mathrm{Nov} \\ & 10 \mathrm{Apr}-23 \text { Oct } \end{aligned}$ | 14 May |
| 1302 | 14 Jan - 10 July 2 | 2 t June - Dra | 1352 | 10 Apr - 23 Apct | 28 sep |
| 1303 | 4 Jan - ¢9 June | 15 June - 9 Dre | 13,3 13.04 | 19 Apr - 13 Oct | 25 Mar - 17 Sep |
| 1304 1305 | 20 May - 13 Nov 98 May - 22 | ${ }_{17}{ }^{4}$ June - 28 Nov | 1353 | 27 Fcb-23 Ang | 14 Mar - 6 Sep |
| 1305 | 9 May - 2 Nov | 17 Aov $13 \mathrm{~A} \mu \mathrm{r}$ | 1366 | $16 \mathrm{Feb}-11 \mathrm{Aug}$ | 28 July |
| 1306 1307 | 29 Apr - 22 Oct | $1 / \mathrm{Apr}$ i Apr | 1457 | 5 Feb- 11 July |  |
| 1308 | 8 Mar - 1 Sep | 10 Scp | 1358 | 16 Deo | $\left\{\begin{array}{c}31 \text { Deo }\end{array}\right\}$ |
| 1309 | ${ }^{25} \mathrm{~F} \in \mathrm{~b}-21 \mathrm{Aug}$ | 11 Feb | 1350 | 11 Jume - 5 Dec |  |
| 1310 | 14 Feb - 11 Aug | 31. | 1,560 | 31 May - 23 Nov | 15 May |
| 1311 | 26 Dec | ${ }_{5}^{20} \text { Jan - } 16 \text { July }$ | 1361 | $20 \mathrm{May}$ | 5 Mry |
| $1 \begin{aligned} & 1312 \\ & 1313\end{aligned}$ | $\begin{array}{r} 19 \text { June - } 14 \mathrm{Dec} \\ 9 \text { June - } 3 \mathrm{Dec} \end{array}$ | 6) July | 13621 | $40 \mathrm{ct}$ | 18 Oct |
| 131313 | $\begin{aligned} & \text { 9.June } \\ & \text { 30 May } \end{aligned}$ | 15 May - 6 Nov | 1364 | $30 \mathrm{Mar}-23 \mathrm{Sep}$ $18 \mathrm{Mar}-12 \mathrm{Scp}$ | 4 Nar |
| 1315 | 20 Apr - 13 Oct | ${ }^{4} \mathrm{May}$ | 1364 | 18 Mar - | 21 Feb |
| 1316 | $8 \mathrm{Apr}-2$ Oct | ${ }^{23} \mathrm{Apr}$ | 1362 1360 | 27 Jan - 22 July | 7 Aug |
| 1317 | 28 Mar - 21 Sep | 6 Sep 3 Mar | 1367 | 16 Jan - $12 . \mathrm{July}$ | 27 July - 22 Deo |
| 1318 | 5 Feb - 1 Aug | 21 Feb | 1368 | 5 Jan - 1 July | 10 Dec |
| 1920 | $26 \mathrm{Jan}-20 \mathrm{July}$ | $10 \mathrm{Feb}-6 \mathrm{July}$ | $\begin{aligned} & 1369 \\ & 1370 \end{aligned}$ | 14 Nov 11 Jay - 4 Nov | ${ }^{5} 5 \mathrm{May}$ |
| 1321 | 14 Jan - 10 July | $20 \text { June }$ | 1371 | $30 \mathrm{Apr}-24$ Oct | 9 Oct |
| 1322 | 21 Nov - 13 Nov | ${ }_{29} 9 \mathrm{Nor}$ - ${ }^{\text {dec }}$ | 1772 |  | + Apr -27 Sep $2+\mathrm{Mar}-17 \mathrm{Sep}$ |
| 1323 132 | 9 May -- 1 Nov | 24 Apr | 1373 | ${ }_{27} 9 \mathrm{Mar}-2 \mathrm{Sep}$ | 1+ Mar - 8 Aug |
| 1325 |  | $13 \mathrm{Apr}-700 \mathrm{t}$ | 1374 1375 | $16 \mathrm{Feb}-12 \mathrm{Aug}$ | 29 July |
| 1326 | $19 \mathrm{Mar}-12 \mathrm{Sep}$ | 26 Sep | 1736 | 26 Dec | 17 July |
| 1327 | ${ }_{25}^{8 \mathrm{Mar}-{ }^{2} \mathrm{~S}^{\text {S }} \mathrm{p}}$ | 16 Sep | 1777 | 22 June - 15 Dec | 10 Jan - 31 Dec |
| 1328 | $25 \mathrm{Feb}-21 \mathrm{Aug}$ | 27 July | 1378 | 11 June - \& Dec | 27 Any |
| 1329 |  | 16 July | 1779 | 31 Mlay - 24 Nov | 16 May 5 May |
| 1330 | $\left\{\begin{array}{c}\text { 26 Dec }\end{array}\right\}$ | 16 July | 136 | 1406 |  |
|  | 20 June - 15 Dec | 30 Nov | 1381 | 9 Apr - 4 Oct | 18 Oct |
| 13,132 | 9 Juve - | 25 Mny | 1382 | 2! Mur - 23 Sup | 29 Ang |
| 1383 | $30 \mathrm{Apr}-230 \mathrm{ct}$ | 14 May | 11384 | $7 \mathrm{Fcb}-2 \mathrm{Aug}$ | 17 Aug |
| 1714 | $19 \mathrm{Apr}-13$ Oct | 4 May | 1385 | 27 Jnn - $22 . J u l y$ | ${ }^{6}$ Aug ${ }^{\text {Jan }}-22 \mathrm{De}$ |
| 1330 1330 | $8 \mathrm{Apr}-30$ | ${ }^{6} 5 \mathrm{~S}$ \% | 1386 | 16 Jau-12 July | ${ }_{16}^{10 \text { Junce }}$ |
| 1337 | 15 Feb--12 Aug | 3 Mar | 1387 1388 | 27 Nov - 14 Nov | 5 June |
| 1338 | $5 \mathrm{Feb}-1{ }^{1} \mathrm{Aug}$ | $20 \mathrm{Feb}-18$ July | 1389 | 16 May - 4 Nov |  |
| 1339 1340 | 26 Jnn - 21 July | $7{ }^{\text {July - }}$ | 1390 | 29 Apl | 9 Oct |
|  | 31 May - 23 Nov | 9 Deo | 1391 | 20 Mar - 2 Sept | ${ }_{24}^{6} \mathrm{Mpr}$ |
| 1341 | 21 May - 13 Nor | ${ }_{5} 5 \mathrm{May}$ - 19 Oct | 1392 1993 | ${ }_{27}^{6}$ Mar-22 Aug | ${ }_{8} 8$ Aug |
| 1343 |  | $\begin{aligned} & 25 \text { Apr }-19 \text { Oct } \\ & 7 \text { Oct } \end{aligned}$ | 1394 | - | 28 July |
| 1844 1345 | $29 \mathrm{Mar}-23 \mathrm{Sep}$ $18 \mathrm{Mar}-12 \mathrm{Sep}$ | 26 Sep | 1395 | $\left\{\begin{array}{c}6 \text { Jan - } 3 \text { July } \\ 26 \mathrm{Dc}\end{array}\right\}$ | - - |
| 1346 | 8 Mar - 1 Sep | $22 \mathrm{Feb}-7 \mathrm{Au}$ | 1396 | 21 June - 15 Dec | 11 Jnn - 6 Junc |
| 1347 |  | ${ }_{26}^{11 \text { Jeb - }}$ - Aug | 1397 | 11 June - 4 Dec | $20.12 y$ |
| 1348 | 17 Jan-11 July | 26 July | 1393 | 26, Oot | 16 May - 9 Nov |
| 1349 | , $\left\{\begin{array}{c}5 \mathrm{Jan}-1 \text { July } \\ 2 \overline{\text { aneo }}\end{array}\right\}$ | 10 Dec 30 Nov | 1399 | 20 Apr - 15 Oct O Oct | 29 Oct <br> 26 Mar |
| 1350 | 20 June | 30 Nov |  | 9 Apr - 3 Ot |  |

TABLEXVIII-(Continued)
Last of Eclipses

| A D | Lunab | Solar | A B | Lemat | SOLAE. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1401 | 30 Mar | 15 Mar - 8 Sep | 1451 | 17 Jan - 13 July | 28 June |
| 1402 | 13 Aug | 4 Mar | 1452 | $7 \mathrm{Jan}-27 \mathrm{Nov}$ | 17 June - 11 Dec |
| 1403 | 7 Fob- 2 Aug | 18 Aug | 1453 | 2) May - 16 Nov | 80 Nov |
| 1404 | 27 Jan - $22 . \mathrm{July}$ |  | 1454 | 12 May - 5 Nov | 27 Apr |
| 1405 | 5 Dee | 1 Jais - 26 June | 1450 | 1 May - 2000 t | $17 \mathrm{Apr}-1100{ }^{\text {a }}$ |
| 1406 | 2 June - 25 Nov | lb June | 1456 | 32 Mar | $\bigcirc \mathrm{Apr}$ |
| 1407 | 22 May - 15 Nov | 11 Oct | 1457 | 11 Mar - 3 Sop | 18 Sep |
| 1408 1409 | 10 M ny | 3 Apr - 19 Oct 15 Apr- 90 ct | 1488 1469 | 8 Feb- 24 Aug | 3 Feb - 29 July |
| 1410 | 21 Mar - 13 Sep | + Apr | 1460 | $\left\{\begin{array}{c} 8 \mathrm{Jan}-3 \text { July } \\ 28 \mathrm{Dec} \end{array}\right\}$ | 18 July |
| 1411 | 10 Mar - 2 Sep | 19 Ang |  |  |  |
| 1412 | 22 Aug | $12 \mathrm{Feb}-7 \mathrm{Aug}$ | 1461 | 22 June - 17 Dec | 7 July - 2 Dec |
| 1413 | 17 Jan - 13 July | 1 Feb | 1462 | 12 June | ${ }^{21} \mathrm{Nov}$ May - 11 Nor |
| 1414 | $\left\{\begin{array}{c}6 \text { Juu -3 July } \\ 20 \text { Dec }\end{array}\right\}$ | 17 June | $\begin{aligned} & 1+63 \\ & 1 \nmid 64 \end{aligned}$ | 22 Apr - 10 Oct | $\begin{aligned} & 18 \text { May - } 11 \text { Nov } \\ & \text { 6 May - } \end{aligned}$ |
| 1415 | 22June - 16 Deo | 7 June | 1465 | $11 \mathrm{Apr}-4$ Oct | 20 Sep |
| 1416 | 5 Nov | 27 May - 19 Nov | 14 (1) | 44 sep | 16 Mar |
| 1417 | 1 May - $2^{2}$ Oct |  | 1167 | 1) Aug | 6 Mar |
| 1418 | ${ }^{20}$ Apr - 14 Oct | $f_{6}$ Apr | 1468 | $8 \mathrm{Feb}-4 \mathrm{Aug}$ |  |
| 1419 | 10 Apr | 36 Mar | 1469 | $27 \mathrm{Jon}-24 \mathrm{July}$ | 9 July |
| 1420 | 29 Feb - 23 Aag | 14 Mar - 8 Sep | 1470 | 17 Jan - 8 D ¢ 0 | 28 June - 22 Deo |
| 1421 | $17 \mathrm{Teb}-13 \mathrm{Ang}$ | 28 Aug | 1471 | 3 June - 27 Nov |  |
| 1422 | ${ }_{1} \mathrm{Feb}-2 \mathrm{Aug}$ | 23 Jan | 1472 | 22 May - 15 Nor | 8 May |
| 1423 | 17 Deo | 8 July | 1473 | $12 \mathrm{Muy} \mathrm{-} 4 \mathrm{Nov}$ | 27 Afr |
| 1424 | 12 June - 6 Doo | 26, June | 1474 |  | 16 Apr - 11 Oot |
| 1425 | 1 Jnne - 2 Nor | 10 Yov | 1475 | $22 \mathrm{Mar}-15 \mathrm{Sep}$ | 30 Bep |
| 1426 | 21 May | 7 May | 1476 | 10 Mar - 3 Sep | 20 Feb |
| 1427 | 11 Apr | 20 Oct | 1777 |  | 8 Aug |
| 1428 | $31 \mathrm{Mar}-23$ Sep | 14 Apr | $14^{\prime \prime}$ | 18 Jau - 15 July | $2{ }^{\text {J July }}$ |
| 1429 1430 | $20 \mathrm{Mar}-13 \mathrm{Nep}$ | 30 Ang 19 Ang | 1479 | $\left\{\begin{array}{c}8 \mathrm{Jan}-4 \mathrm{July} \\ 29 \mathrm{Da}\end{array}\right\}$ | 19 July -13 Deo |
|  |  |  | 1880 | 22 June |  |
| 1431 | 24 Juy | 12 Fets - 8 Aug |  |  |  |
| 1432 |  | 2 5eb-27 Juve |  |  |  |
| 1133 | $\left\{\begin{array}{c}6 \mathrm{Jan} \text {-2 July } \\ 26 \mathrm{Dce}\end{array}\right\}$ | 17 J Ine | $\begin{aligned} & 148 \\ & 1433 \end{aligned}$ | $\begin{array}{r} 3 \mathrm{Muy}-26 \mathrm{Oct} \\ 22 \mathrm{Apr}-16 \mathrm{Oct} \end{array}$ | 17 May 2 Oct |
|  | is Nuv | - June - 30 Nov | 1484 | ${ }_{4}^{24}$ Oct | 20 bep |
| 14 | 1- May - C ${ }^{\text {a }}$ v | 20 Vor | $148{ }^{\circ}$ | 12 Aug | 16 Mar - 9 Scp |
| $1+36$ | $30 \mathrm{~A}_{1} \mathrm{~s}$ - $\mathrm{F}_{\text {Oct }}$ | If Apr | 1466 | 16 Гub - 15 Ang | ¢ Mar |
| 1137 | -1) Apr - 14 Otr | [5pr - ${ }^{17}$ Sep | 1497 | 8 Feb - 4 Aug | 20 July |
| $1+761+5$ |  | 1.J Sup | 1488 | 28 Jan | 9 July 23 dee |
| 1439 1440 | $1 \mathrm{Mar}-24 \mathrm{Ang}$ $18 \mathrm{keb}-14 \mathrm{Aug}$ | S 316 | 1443 1430 | 13 Iune - 9 Dec 2 June - 27 Nov | 1 Jan - 22 Dee |
| 1441 | 27 Dca | 23 Jan - 18 July | 1491 | 25 May - 16 Nor | 8 May |
| 1442 | 23 Jum - 17 Dec | 7 July | 1492 |  | 26 Apr - 21 Oct |
| 1443 | 12 June - 7 Dec | -7 June | 1493 | $2 \mathrm{Apr}-25 \mathrm{Sep}$ | 10 Oct |
| 1444 | 31 May | ${ }^{10}$ Nov | 1494. | $22 \mathrm{Mar}-15 \mathrm{Sep}$ $11 \mathrm{Mar}-4 \mathrm{Sep}$ | ${ }^{7}{ }^{7} \mathrm{Mar}$ Feb - 20 Aug |
| 14.46 | $11 \mathrm{~A}_{1} \mathrm{r}$ - 5 Oct | 36 Apr | 1495 | 11 Mar - 40 S Sap | $25 \mathrm{Feb}-20 \mathrm{Aug}$ $14 \mathrm{Feb}-8 \mathrm{Aug}$ |
| 1447 |  | 10 ¢p | 1497 | 18 Jan - 14 July | 29 July |
| 1448 | 12 bep | 5 Mar - 29 Aug | 1498 | 8 Jan - 3 July | 13 Dec |
| 1449 | 4 Aug | 18 Aug | 1499 |  | 8 June |
| 1450 | 28 Jan - 24 July | 12 Feb | 1500 | 13 May - 6 Nov | 28 May |

TABLE XVIII.-(Continued)

## Lust of Eclupses



- From thas year all the dates are given in the Gregorian Calendar, or New Style.


## LIST UF ECLIPSES

TABLEXVIII-(Continued)
Lest of Er lepses

| A D | Lunar | Solat | A 1 | Lunar | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1601 | 15 Jnne - 9 Dec | $\left\{\begin{array}{c}4 \text { Jan-30 Jane } \\ 24 \text { Deo }\end{array}\right\}$ | 1651 1652 | $25 \mathrm{Max}-17 \mathrm{Sep}$ | 8 Apr |
| 1602 | 4 June - 29 Nov | 21 May | 1653 | 14 Mar - 7 Sep | 29 Mar |
| 1608 | $24 \mathrm{May}-18$ Nov | 11 May | 1654 | $3 \mathrm{Mar}-27 \mathrm{Aug}$ | 12 Aug |
| 1604 |  | 29 Apr | 1655 |  | $6 \mathrm{Feb}-2 \mathrm{Ang}$ |
| 1605 1606 | ${ }^{3} \mathrm{Apr}-27 \mathrm{Sop}$ | 12 Oct | 1656 | $\left(\begin{array}{c}11 \text { Jan } \\ 81 \text { Dec } \\ \text { July }\end{array}\right\}$ | 26 Jan |
| 1606 | 14 Mar - 16 Sar 6 Sep | 26 Feb | 1667 | $25 \mathrm{June}-20 \mathrm{Dec}$ | 11 Jnne |
| 1608 | 27 July | 10 Aug | 1658 |  | 1 June - 24 Nov |
| 1609 | 20 Jan - 16 Jnly | 30 July - 26 Dec | 1659 | 6 May - 30 Oct | 14 Nov |
| 1610 | $\left\{\begin{array}{c} 9 \mathrm{Jan}-6 \mathrm{July} \\ 30 \mathrm{Dec} \end{array}\right\}$ | 15 Deo | 1660 | $25 \mathrm{Apr}-18$ Oct | 3 Nov |
| 1611 |  |  | 1661 | $4 \mathrm{Apr}-80 \mathrm{ot}$ | 30 Mar |
| 1612 | 14 May - 8 Nov | ${ }^{40} \mathrm{Muy}$ | 1662 1667 162 |  | 20 Mar - 12 Sep |
| 1613 | 4 May - 28 Oct |  | 1664 | 11 Veb - 6 Aug | $28 \mathrm{Jan}-21 \mathrm{Aug}$ |
| 1614 | $24 \mathrm{Apr}-170 \mathrm{ct}$ | ${ }^{39}$ Oct | 1645 | ${ }^{3} \mathrm{Jan}-26 \mathrm{July}$ | 16, Jan |
| 1615 | $3 \mathrm{Mar}-27 \mathrm{Aug}$ | 29 Mar - 22 Sej | 360 | 16. June - 11 Dec | 5 Jan -- 2 July |
| 1617 | 20 Feb - 16 Aug | 1 Aug | 16.6 | "Tune - 10 Nov | 21 Juno |
| 1618 | 9 Feb - 6 Aug |  | 16.6 |  | 30) Apr |
| 1619 | 26, June-21 Deo | 11 Tuly | 1670 | 5 Apr - 29 Sep | 19 Apr |
| 1620 | 15 June - 9 Deo | 31 May |  | 5 Apr - |  |
| 1621 | 4 June - 29 Nov | 21 May | 16.71 | $25 \mathrm{Mar}-18$ Sep | 3. Sep |
| 1622 |  | 10 May 3 Nov | 16.72 | 13 Mar - 7 scp | 22 Aug |
| 1623 | $1: \mathrm{Apr}-8$ Oct |  | 16.73 |  | 12 Aug |
| 1624 | ${ }^{3} \mathrm{Apr}-26$ Sep | 19 Mar | 1674 | 22 Jan - 17 July |  |
| 1625 | 24 Mar - 16 Stp |  | 1675 | 11 Jan - 7 July | 23 Juno |
| 1626 | $7{ }^{7}$ Aug | 26 Feb - 21 Ang | 16.76 | 1 Jan - 25 Jume | 11 June - 5 Dec |
| 1627 | 31 Jau - 28 July | 11 Aug | 1677 | 17 May - 9 Nov | 24 Nov |
| 1628 | 20 Jan - 16 July | 6 Jan - 2 n Dee | 1678 | 6 May - 29 Oct | 21 Apr - 14 Noy |
| 1629 | 9 Jan -19 Noy | 21 Juno - 14 DEL | 1679 | $26 \mathrm{Apr}-19 \mathrm{Oct}$ | $10 \mathrm{Apr}$ |
| 1630 | 26 May - 19 Nov | 10 June | 1680 |  | 20 Mar |
| $\begin{aligned} & 1631 \\ & 1692 \end{aligned}$ | $\begin{array}{r} 15 \mathrm{May}-8 \mathrm{Nov} \\ 4 \mathrm{May}-27 \end{array}$ | 31 May - 250 Oet | 1681 | 4 Mar - 29 Aug | 12 Sep |
| 1633 |  | 8 Apr - 3 Oct | 1688 | $21 \mathrm{Feb}-18$ Aug | $1{ }^{1}$ Sep |
| 1634 | 14 Mar - 7 Sep | 29 Mar | 1683 | ${ }_{27}^{11} \mathrm{Feb}$ - 71 Ang - 21 Dec | 27 Jan - 2 |
| 1635 | $3 \mathrm{Mar}-28$ Aug | 12 Aug | 1668 | 27 June - 210 Dec | 1 July |
| 11636 | 20 Feb - 16 Aug | 1 Aug 26 Jan | 1686 | 6 June - 29 Nov |  |
| 1638 | 26.5 June - 21 Dec | 26 Jan | 1687 |  | 11 May - 5 Nov |
| 1639 | 15 June - 10 Dec | 1 June | 1688 | $15 \mathrm{Apr}-9$ Oct | 30 Apr |
| 1640 | 15 Juae - 10 Dec | 1 June | $\left.\begin{aligned} & 1689 \\ & 1690 \end{aligned} \right\rvert\,$ | $\begin{aligned} & 4 \mathrm{Apr}-29 \mathrm{Sep} \\ & 24 \mathrm{Mar}-18 \mathrm{Sep} \end{aligned}$ | 13 Sep |
| 1641 | $26 \mathrm{Apr}-18$ Oct | 3 Nov |  |  |  |
| 1642 | $15 \mathrm{Apr}-8$ Oct | 30 Mar | 1691 |  | 28 Feb |
| 1643 1644 1 | 4 Apr - 27 Sep | 20 Mar | 1692 | $2 \mathrm{Feb}-28$ Jnly | 17 Feb |
| (164t | 10 Fcb - 7 Aug | ${ }_{21}^{1 \mathrm{Sep}}$ | 1693 1694 | $22 \mathrm{Jan}-17 \mathrm{July}$ | 22 June - 16 Dec |
| 1646 | $31 \mathrm{Jan}-27 \mathrm{July}$ | 17 Jau | 1695 | 28 May - 20 Nov | - Dec |
| 16.7 | 20 Jan | $\left\{\begin{array}{c} 5 \text { Jan } \\ 26 \text { Dec } \end{array}\right.$ | 1696 1697 | 16 May - 9 Nov <br> 6 May - 29 Oct | 21 Apr |
| 1648 | 5 June - 30 Nov | 21 Jnne | 1698 |  | 40 ct |
| 1649 | 26 May - 19 Nov | 10 June - 4 Nov | 1699 | 15 Mar - 9 Sep | 23 Sep |
| 1650 | 15 May - 6 Nov | 25 Oct | 1700 | $5 \mathrm{Mar}-29 \mathrm{Aug}$ | 19 Feb |

TABLE XVIII-(Contmued)
Lret of Eclıpses

| A D | Lunar | Solar | A D | Lunar | Solail |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1701 | $22 \mathrm{Feb}-18 \mathrm{Aug}$ | 7 Fob-4 Aug | 1751 | 9 June - 2 Dec | 25 May |
| 1702 |  | $2 \ddagger$ July | 1752 1758 |  | ${ }_{26}^{13} \mathrm{May}$ - 6 Nov |
| 1708 | $\left\{\begin{array}{c}3 \sqrt{\text { an-29 }} \text {, } \\ 23 \\ \text { Dec }\end{array}\right\}$ | 14 July --8 Dec | 1758 1754 | $17 \mathrm{Apr}-12$ Oct |  |
| 1704 | 17 June - 11 Dec | 27 Nov | 1755 | 28 Mar - 20 Sep | 12 Mnr |
| 1705 |  |  | 1756 |  | 1 Mar |
| 1706 | $28 \mathrm{Apr}-21$ Oct | 12 May | 1757 | 4 Feb - 30 July | $1+\mathrm{Agg}$ |
| 1707 | $17 \mathrm{Apr}-11$ Oct | 2 May | 1758 | 24 Jan - 20 July | 30 Deo |
| 1708 | 5 Apr - 29 Sep | 14 Sep | 1759 | 1: Jan - 10 July | $1{ }^{1 \prime}$ Dce |
| 1709 |  | $11 \mathrm{Mar}-4 \mathrm{Sep}$ | 1760 | 29 May - 22 Nov | 13 Juнe |
| 1710 | $13 \mathrm{Feb}-9 \mathrm{Aug}$ | 28 Feb |  |  |  |
| 1711 | 3 Feb-29 July | $1 \overline{0}$ July |  | 18 May - 12 Nov | 3 June |
| 1712 | 23 Jan - 18 , July | 3 July - 28 Dec | 1762 1763 | 8 May - 1 Nov | $33 \mathrm{Apr}-7$ Oct |
| 1713 | $8{ }^{8} \mathrm{Juno}-2 \mathrm{Dec}$ | 17 Deo | 1764 | 18 Mar - lu Sep | 1 Apr |
| 1714 | 29 May - 21 Nov 18 May - 11 | ${ }_{7}^{7} \mathrm{Dec}$ | 1765 | 7 Mar - 310 Allg | 10 Aug |
| 1715 | 18 May - 11 Nov | 22 Apr - 15 Oct | 1766 | $24 \mathrm{FCb}-20 \mathrm{Ang}$ | ${ }_{5}^{5} \mathrm{Aug}$ |
| 1717 | $27 \mathrm{Mar}-20 \mathrm{sep}$ |  | 1780.8 | $4 \mathrm{Jan}-23 \mathrm{Drc}$ |  |
| 1718 1719 | $16 \mathrm{Mar}-9 \mathrm{Sep}$ | ${ }_{19}^{2} \mathrm{Mar}$ - 24 Sep | 1769 | 19 June - 13 DCL | 8 Juu - 4 Tune |
| 1719 1720 | 6 Mar - 29 Aug | 19 Feb <br> 8 Yeb-4Aug | 1780 |  | 23 Muy - 17 Nov |
| 1721 | $13 \mathrm{Jan}-9 \mathrm{July}$ | $2 \pm$ July - 19 Dec | 1771 | ${ }^{99} \mathrm{Apr}-23 \mathrm{Oct}$ |  |
| 1722 | $\left\{\begin{array}{c}2 \mathrm{Jaa}-20 \text { Juue } \\ 19 \text { Deo }\end{array}\right\}$ | 8 Dec | 1772 1773 17 | $17 \mathrm{Apr}-11 \mathrm{Ot}$ $7 \mathrm{Apr}-30 \mathrm{Sep}$ | $\begin{aligned} & 3 \mathrm{Apr} \\ & 23 \mathrm{Mar} \end{aligned}$ |
| 1723 1724 |  | ${ }^{32}$ June |  |  |  |
| 1724 1725 |  | ${ }_{12}^{22 \mathrm{Mny}}$ - 60 | 1775 1774 |  | 21 Jun |
| 1726 | $10 \mathrm{Apr}-11$ Oct | ${ }_{25}{ }^{\text {Sep }}$ | 1777 | 23 Jan-2v July | 9 Jan - 5 July |
| 1727 |  | 15 Sep | 1778 | lulupe - 1 Der | 10 June - 4 Duc |
| 1728 | 25 Feb - 19 Aug |  | 1774 | m) Muy - 21 Nov | 14 Juue - 8 Nov |
| 1729 | $13 \mathrm{Feb}-9 \mathrm{Ang}$ | $26 \mathrm{Jul}{ }^{\text {d }}$ | 1780 | 18 May - 12 Nov | 27 Uct |
| 17.50 | $3 \mathrm{fob}-29$ July | 15 July |  |  |  |
|  |  |  | 1781 1782 |  | $23 \mathrm{Apr}-17 \text { Oct }$ <br> 12 Apr |
| 1731 | 20 Jan - 13 Dec | $\left\{\begin{array}{c}89 \text { Deo } \\ 17\end{array}\right\}$ | 1782 13.1 | $29 \mathrm{Mar}-21 \mathrm{Sep}$ <br> 18 Mar - 10 Sep | 12 Apr |
| 1732 | 8 June - 1 Dec | $17 \mathrm{Dec}$ | 1784 | 7 Mar - 30 Aug | 16 Aug |
| 1733 | 28 May - 21 Nov | $13 \text { May }$ | 1785 |  | $9 \mathrm{Feb}-6 \mathrm{Aug}$ |
| 1734 1795 | $7 \mathrm{Apr}-20 \mathrm{ct}$ | 3 May 16 Oct | 1796 | 14.Jan-11 July | 30 Jau |
| 1736 | 26 Mar - 20 Sep | 16 Oct 40 ct | 1787 | $\left\{\begin{array}{c}3 \mathrm{Jan}-30 \mathrm{Juna} \\ 24 \mathrm{Dea}\end{array}\right\}$ | 19 Jan - 15 Jana |
| 1737 1738 | 16 Mar - 9 Sep | ${ }_{1}^{15 \mathrm{Mar}}$ | 1788 |  | 4 June |
| 1738 1739 | 24 Jan - 20 July | ${ }_{15}^{15} 4 \mathrm{Aug}$ ( 30 Dec | 1689 | 9 May - 3 Nov | 17 Nov |
| $17 \pm 0$ | 13 Jan - 9 July | 18 Dec | 1790 | $29 \mathrm{Apr}-23$ Oot |  |
| $\begin{aligned} & 1741 \\ & 1742 \end{aligned}$ | $\begin{aligned} & 1 \mathrm{Jan} \\ & 19 \mathrm{May}-12 \text { Nov } \end{aligned}$ | $\begin{aligned} & 13 \text { June - } 8 \text { Deo } \\ & \text { 3 June } \end{aligned}$ | $\begin{aligned} & 1791 \\ & 1792 \end{aligned}$ | $18 \mathrm{Apr}-12 \mathrm{Oct}$ | 3 Apr 16 Sep |
| 17743 | 19 May - 12 Nov 8 May - 2 Nov | 23 May - 17 Oct | 1793 | 25 Frb - 21 Aug | 5 Sep |
| 1744 | $26 \mathrm{Apr}-21$ Uct | 6 Oct | 1794 1795 | $14 \text { Feb - } 11 \text { Ang }$ | $\begin{aligned} & \text { 11 Jan } \\ & 21 \mathrm{Jan}-16 \mathrm{Jalv} \end{aligned}$ |
| 1745 1746 | 7 Mar - 30 Ang | ${ }_{22}^{2} \mathrm{Mpr}$ | 1795 1796 | $\begin{aligned} & 4 \text { Feb }-31 \text { July } \\ & 14 \text { Deo } \end{aligned}$ | $21 \mathrm{Jan}-16$ July $10 \mathrm{Jan}-4 \mathrm{July}$ |
| 1747 | ${ }_{20} \mathrm{~F}$ Feb-20 Aug | 11 Mar - 6 Aug | 1797 | 9 June - 4 Dec | 24 June |
| 1748 | $1 \mathrm{~F} \mathrm{Feb}-8 \mathrm{Aug}$ | 25 July | 1798 | 29 May - 23 Nov | 8 Nov |
| 1749 1750 | 30 Juno - 23 Dec | $14 \text { July }$ | 1799 1800 |  | 24 Apr |
| 1750 | 19 June - 13 Dec | $8 \mathrm{Jan}$ | 1800 | 9 Apr - 2 Oct | 24 Apr |

TABLE XVIII-(Continued.)
List of Eclupses

| A. D | Lonar | Solar | A D | Lunar | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1801 | $30 \mathrm{Mar}-22$ Sep | 13 Apr - 8 Sep | 1851 | 17 Jan - 13 July | 28 July |
| 1802 | 19 Mar - 11 Sep | 28 Aug | 1852 | $\left\{\begin{array}{c}7 \mathrm{Jan} \\ 26 \mathrm{De} \text { - July }\end{array}\right\}$ | 11 Dec |
| 1803 | 26 Jan - 22 July | 17 Ang |  | ${ }_{21}{ }^{26} \mathrm{Deo}$ |  |
| 1805 | 15 Jan - 11 J JIy | 26 June | 1854 | 12 May - 4 Nov |  |
| 1806 | $5 \mathrm{Jan}-30$ Jnne | 16 Jnne - 10 Dec | 1855 | 2 May - 25 Oct | 16 May |
| 1807 | 21 May - 15 Nct | 6 June - 29 Nov | 1856 | $20 \mathrm{Apr}-13$ Oct | 29 Sep |
| 1808 | 10 May - 3 Nov | 18 Nov | 1857 |  | 18 bep |
| 1809 | 80 Apral - 23 Oct |  | 1858 | $27 \mathrm{Feb}-24 \mathrm{~A} \mathrm{ag}^{\text {d }}$ | 15 Mar |
| 1810 |  | 4 Apr | 1869 | $17 \mathrm{Peb}-13 \mathrm{Aug}$ | 29 July |
|  |  |  | 1860 | $7 \mathrm{Feb}-1 \mathrm{Aug}$ | 18 Jaly |
|  | 10 Mar - 2 Sep <br> $27 \mathrm{Feb}-22 \mathrm{Aug}$ |  | 1 | 17 D90 | \{11 Jan - 8 July |
| 1813 | $15 \mathrm{Feb}-12 \mathrm{Aug}$ | 1 Feb |  |  | $\left\{\begin{array}{l}\text { 1 } \\ \text { Deo }\end{array}\right.$ |
| 1814 | 26 Dec | 21 Jan - 17 July | 1882 | $12 \mathrm{Jane}-6 \mathrm{Dec}$ | 21 Dec |
| 1815 | 21 June-16 Deo | 7 July | 1863 | 2 Juue-25 Nov | 17 Mry |
| 1816 | 10 June - 4 Deo | 19 Nor | 1864 | $11 \mathrm{Apr}-40 \mathrm{ct}$ | 19 Oct |
| 1817 | 30 May $21 \mathrm{Apr}-14$ | ${ }^{16 \mathrm{May}} \mathrm{6}$ - 9 Nov | 1866 | $31 \mathrm{Mar}-2+\mathrm{Sep}$ | $16 \mathrm{Mar}-8$ Oct |
| 1818 | $21 \mathrm{Apr}-140 \mathrm{ct}$ $10 \mathrm{Apr}-30 \mathrm{ct}$ | 6 May | 1867 | 20 Mar - 14 Sop | 6 Mar |
| 1820 | $29 \mathrm{Mar}-22 \mathrm{Sep}$ |  | 1868 |  | $28 \mathrm{Feb}-18$ Aug |
|  |  |  | $\left\{\begin{array}{l} 1869 \\ 1870 \end{array}\right.$ | $\begin{aligned} & 28 \text { Tan - } 23 \mathrm{July} \\ & 17 \mathrm{Jan}-12 \mathrm{July} \end{aligned}$ | $\begin{array}{r} 7 \mathrm{Aug} \\ 22 \mathrm{Dec} \end{array}$ |
| 1821 |  | 4 Mat |  |  |  |
| 1822 | ${ }^{6} \mathrm{Feb}-{ }^{3} \mathrm{Aug}$ |  | $187_{1}$ | $6 \text { Jan - } 2 \mathrm{Ju} y$ | 18 June - 12 Dec |
| 1823 | $26 \mathrm{Jan}-23 \mathrm{July}$ | 11 Feb - 8 July | $1872$ | 22 May - 15 Nov | 6 June |
| 1824 | 16 Jau - 11 July | 26 June - 20 Dec | 1873 | 12 May - 4 Nov | 26 May |
| 1825 | 1 June-25 Nor | 16 June | 1874 | 1 May - 25 Oct | 10 Oct |
| 1826 | 21 May - 14 Nor | $2^{\prime \prime}$ Nov | $1875$ |  | $6 \mathrm{Apr}-29 \mathrm{Sep}$ |
| 1827 | 11 May - 3 Nov | 26, Apr | $\begin{aligned} & 1876 \\ & 1877 \end{aligned}$ | $10 \mathrm{Mar}-3 \mathrm{Sep}$ $27 \mathrm{lab}-23 \mathrm{Alg}$ |  |
| 1829 | 20 Mar - 13 Sep | 28 Sep | 1878 | 17 Feb - 13 Aug | 29 July |
| 1830 | 9 Mar - 2 Sep | 23 Feb | $\left\lvert\, \begin{gathered} 1879 \\ 1880 \end{gathered}\right.$ | $\begin{aligned} & 28 \mathrm{Dec} \\ & 22 \mathrm{June}-16 \mathrm{Dec} \end{aligned}$ | $\left\|\begin{array}{l} 22 \mathrm{Jan}-19 \mathrm{July} \\ 11 \mathrm{Jan}-31 \mathrm{Dec} \end{array}\right\|$ |
| $\begin{aligned} & 1831 \\ & 1832 \end{aligned}$ | $26 \text { Feb }-23 \text { Aug }$ | 27 July | 1881 | 12 Junc - 5 Dec | ${ }^{28} \mathrm{May}$ May - 11 Nav |
| 1833 | $\left\{\begin{array}{c}6 \text { Jan } \\ 26 \mathrm{Dec}\end{array} \mathrm{T}^{\text {July }}\right.$ ( $\}$ | 17 July | 1883 | 22 Apr - 16 Oct | $17 \mathrm{Mby}-11 \mathrm{Nov}$ 31 Oct |
|  | 21 June- 16 Dec |  | 1884 | 10 Apr -4 Oct | 27 Mar - 19 Oot |
| 1835 | 10 June | 27 Mny-20 Nov | 1885 | 30 Mar - 24 Sep |  |
| 1836 | 1 May - 24 Oct | 10 May | 1886 |  | 29 Ang |
| 1837 | $20 \mathrm{Apr}-1 \mathrm{~J}$ Oet | 4 May | 1887 | $8 \mathrm{Feb}-3 \mathrm{Aug}$ | 19 Aug |
| 1838 | 10 Apr - 3 Oct | Mar- | 1888 | 26 Jan - 23 July |  |
| 1839 |  | $15 \mathrm{Mar}-7 \mathrm{Sep}$ | 1889 1890 | 17 Jan - 12 July | 22 Dec |
| 1840 | $17 \mathrm{Feb}-13 \mathrm{Aug}$ | $4 \mathrm{Mar}_{\mathrm{B}}$ | 1890 | 3 June - 26 Nov | 17 June |
| 1841 | $6 \mathrm{Fob}-2 \mathrm{Aug}$ |  | $\begin{aligned} & 1891 \\ & 1892 \end{aligned}$ | 23 May - 16 Nov <br> 11 May - 4 Nov | 6 June |
| 1842 | $26 \mathrm{Jan}-22 \mathrm{July}$ | $8 \mathrm{July}$ | 1893 |  | 16 Apr |
| 1843 | 12 June - 7 Dec | 21 Deo | 1894 | $21 \mathrm{Mar}-15 \mathrm{Scp}$ | 6 Apr - 29 Sep |
| 1844 | 31 May - 25 Nov |  | 1895 | 11 Mar - 4 Sep | $26 \mathrm{Mar}-20 \mathrm{Aug}$ |
| 1845 | $21 \mathrm{May}-14 \mathrm{Nov}$ | $6 \mathrm{May}$ | 1896 | $28 \mathrm{Feb}-23 \mathrm{Aug}$ | 9 Aug |
| 1846 | $31 \mathrm{Max}-24$ Sep | $\begin{array}{r} 25 \mathrm{Apr}-20 \text { Oct } \\ 9 \mathrm{Oct} \end{array}$ | 1897 |  |  |
| 1848 | 19 Mar - $138 \mathrm{E}_{\text {ep }}$ | 27 Sep | 1898 | $\left\{\begin{array}{c}8,27 \\ 127 \mathrm{Deo}\end{array}\right\}$ | 22 Jan |
| 1849 | $9 \mathrm{Mar}-28 \mathrm{f}$ | $\begin{aligned} & 29 \mathrm{Feb}^{2} \mathrm{Feb}-7 \mathrm{Aug} \end{aligned}$ | $\left\{\begin{array}{l} 1899 \\ 1900 \end{array}\right.$ | $\begin{aligned} & \text { 23 Jnne }-17 \mathrm{Dec} \\ & 13 \text { Jane } \end{aligned}$ | 11 Jan - 8 Jnne 28 May - 22 Nov |

TABLE XVIII.-(Concluded)
List of Eclupses

| A D | Lunar | Solar | A D | Lumar | Solar |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1901 | 3 May - 27 Oct | 18 May - 11 Nov | 1931 |  | 1 Sep |
| 1902 | $22 \mathrm{Apr}-17$ Oct | 31 Oct | 1952 | 10 Fob - 5 Aug | $25 \mathrm{Feb}-20 \mathrm{Aug}$ |
| 1903 | $11 \mathrm{Apr}-6$ Oct | 29 Mar - 21 Sep | 1953 | $29 \mathrm{Jan}-26 \mathrm{Jujy}$ | $14 \mathrm{Feb}-11$ July |
| 1904 |  | 17 Mar | 1954 | 19 Jan - 16 July | 30 Jave - 25 Dec |
| 1905 | $19 \mathrm{Feb}-15 \mathrm{Aug}$ | 30 Aug | 1955 | 29 Nov | 20 June - 14 Dec |
| 1906 | 9 Feb - ${ }^{4}$ Aug | 20 Aug | 1956 | 24 May - 18 Nov | 2 Deo |
| 1907 | $29 \mathrm{Jan}-25 \mathrm{July}$ | 14 Jan | 1957 | 13 May - 7 Nov | 24 Oct |
| 1908 | 7 Dec | 27 June - 22 Dec | 1958 | ${ }^{1}$ May | 19 Apr |
| 1909 | 4 June - 27 Nov | 17 June | 1959 | $24 \mathrm{Mar}-17 \mathrm{Sep}$ | 2 Oct |
| 1910 | $24 \mathrm{May}-17 \mathrm{Nov}$ | 2 Nor | 1060 | 13 Mar - 5 Sep | 21 Sep |
| 1911 |  | 22 Oct | 1961 1962 | 2 Mar - 26 Aug | $\begin{array}{r} 11 \\ 4 \mathrm{Fug}-31 \mathrm{July} \end{array}$ |
| 1912 | $1 \mathrm{Apr}-26 \mathrm{Bep}$ | $17 \mathrm{Apr}-10$ Oct |  | \{ 9 Jan - 6 July \} |  |
| 1913 | $22 \mathrm{Mar}-15 \mathrm{Sep}$ |  | 1967 | $\{30 \mathrm{Dec}$, $\}$ | 25 Jan |
| 1914 | 11 Mar - 4 Sep | 21 Aug | 1964 | 25 June - 19 Dec | $9 \mathrm{July}-4$ Deo |
| 1915 |  | 14 Feb - 10 Aug | 1965 |  | 24 Nov |
| 1916 | $18 \mathrm{Jan}-15 \mathrm{July}$ | 3 Feb | 1966 | ${ }^{4} \mathrm{May}-29$ Oct | 20 May - 12 Nov |
| 1917 | $\left\{\begin{array}{c}8 \text { Jan-4 July } \\ 28 \text { Dec }\end{array}\right\}$ | 23 Jan - 19 Jnne | 1907 | $\begin{aligned} & 2 \pm \mathrm{Apr}-1800 \mathrm{l} \\ & 13 \mathrm{Anr}-22 \end{aligned}$ | 9 May |
| 1918 | 24 June | $8 \text { June - } 3 \text { Dee }$ | 196 | $\{\operatorname{Sep}-6$ Oot $\}$ |  |
| 1919 | $8 \text { Nov }$ | $29 \mathrm{May}-22 \mathrm{Nov}$ | $1969$ |  | $18 \text { Mar }$ |
| 1820 | 8 May - 27 Oct | 10 Nov | $1970$ | $21 \mathrm{Feb}-17 \mathrm{Aug}$ | $7 \mathrm{Mar}$ |
| 1921 | 22 Apr - 16 Oct | Apr - 1 Oct | $\begin{aligned} & 1971 \\ & 1972 \end{aligned}$ | $\begin{aligned} & 10 \mathrm{Fob}-6 \mathrm{Aug} \\ & 30 \mathrm{Jan}-26 \mathrm{July} \end{aligned}$ | $25 \mathrm{Feb}-22 \mathrm{July}$ |
| 1922 |  | 28 Mar | 1973 |  | 4 Jan - 30 June |
| 1923 | $3 \mathrm{Mar}-26$ Aug | 17 Mar - 10 Sep | 1973 |  | 24 Dec |
| 1924 | 20 Feb - 14 Aug | 30 Aug | 1974 | 4 June - 29 Nov | 13 Dec |
| 1925 | $8 \mathrm{Feb}-4 \mathrm{Aug}$ | 24 Jan | 1975 | 25 May - 18 Nov | 11 May 230 |
| 1926 | 19 Dee | 14 Jan - 8 July | $1976$ | 13 May | $29 \mathrm{Apr}-23 \text { Oct }$ |
| 1927 | 15 June - 8 Dec | 29 June 12 Nov | 1977 | ${ }_{24}{ }^{\text {Apr - }} \mathbf{2 7} \mathrm{Sep}$ | $18 \mathrm{Apr}$ |
| 1928 | 3 June- 27 Nov | ${ }_{19} 9 \mathrm{May}$ - 12 Nov ${ }^{\text {Nay }} 1 \mathrm{Nov}$ | 1978 1979 | 24 Mar - 16 Sep 13 Mar - 6 Sep | $\begin{array}{r} 28 \mathrm{Oct} \\ 26 \mathrm{Feb} \end{array}$ |
| 1929 1930 | $\begin{aligned} & 23 \mathrm{May} \\ & 13 \mathrm{Apr}- \end{aligned}$ | 9 May - 1 Nov | 1979 1980 | 13 Mar - 6 Sep | $\begin{aligned} & 26 \mathrm{Feb} \\ & 16 \mathrm{Feb} \end{aligned}$ |
|  |  |  | 1981 | 17 July | 31 July |
| 1931 | ${ }_{2} \mathrm{Apr}-26 \mathrm{Sep}$ | 17 Apr | 1982 | $\left\{\begin{array}{c}9 \text { Jan - } 6 \text { July }\end{array}\right\}$ | 20 July - 15 Dec |
| 1932 1939 | 22 Mar - 14 Sep | $2+\mathrm{Feb}-21 \mathrm{Aug}$ | 1985 | ${ }_{25} \mathrm{June}^{30 \mathrm{Sep}}$ | 11 June - 4 Dec |
| 1934 | $30 \mathrm{Jan}-20 \mathrm{Julv}$ | $1+\mathrm{Feb}-10 \mathrm{Aug}$ | $198+$ |  | 36 May |
| 1935 | 19 Jau - 16 July | 1 | 1 15 | ${ }^{4}$ May - 28 Out | 12 Nov |
| 1936 | 8 8 Jnn - 4 July | $1 \begin{aligned} & 19 \\ & y \\ & y\end{aligned}$ |  | 24 Apr - 17 Oct |  |
| 1937 | 18 Nor 14 May 7 Nor | ${ }_{22}^{2}$ Nec | 1987 | 27 Aug | $29 \mathrm{Mar}-23$ Sep 18 May - 11 Sep |
| 1934 | * May - 28 Oct | 19 Apr | 1984 | 20 Feb - 17 Aug | 18 May-11 Sep |
| 1940 | 22 Apr | 1 Oot | 1990 | $9 \mathrm{Feb}-6 \mathrm{Aug}$ | 22 July |
| 1941 | 13 Mar - 5 Sep | 21 Sep | 1991 | $30 \mathrm{Jan}-31 \mathrm{Dec}$ |  |
| 1942 | $2 \mathrm{Mar}-26 \mathrm{Aug}$ | 10 bep | 1992 | 15 June - 9 Dee | 24 Deo |
| 1943 | $20 \mathrm{Feb}-15 \mathrm{Aug}$ | ${ }^{4} \mathrm{Feb}$ | 1493 | 4 June - 29 Nov | 21 May |
| 1944 | 29 Dec 19 dec | $25 \mathrm{Jan}-20 \mathrm{Jaly}$ | 194 | 25 May | 10 May - 3 Nov |
| 1945 | ${ }^{25}$ June - 19 Dec | 14 Jan - 9 Juty | 1995 | ${ }_{15}^{15} \mathrm{Apr}$ 3 ${ }^{3} \mathrm{Apr}-27 \mathrm{sep}$ | ${ }_{12}^{29} \mathrm{Aprt}-24$ Oot |
| 1946 | 11 3 June - 8 Dule | 20 May | 1996 | ${ }_{16}^{3} \mathrm{Apr}-27 \mathrm{Sep}$ | 12 Oct |
| 1948 | 23 Apr - 18 Oct | 9 May - 1 Nov | 1998 |  | $26 \mathrm{Feb}-22 \mathrm{Aug}$ |
| 1949 | 13 Apr - 7 Oct | 28 Apr | 1999 | 28 July | 16 Feb - 11 Aug |
| 1950 | 2 Apr - 26 dep | 12 Sep | 2000 | 21 Jan-16 July | 31 July |

## TABLE XIX

THE DAKHINI CYCLE OF JUPITER.
The Jovian cycle of 60 years, as used in Southern India, is a simple period of 60 solar years, in which year has a separate name. There are no omitted years as in the Noithein reckoning, and the cycle has no longer any connection with Jupiter's revolution The cycles begin in' the following years A D, with the year named Piabhava

| $A$ D | 7 | - | - | - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 67 | 367 | 667 | 967 | 1267 | 1567 | 1867 |
|  | 127 | 427 | 727 | 1027 | 1327 | 1627 | 1927 |
|  | 187 | 487 | 787 | 1087 | 1387 | 1687 | 1987 |
|  | 247 | 547 | 847 | 1147 | 1447 | 1747 | 2047 |
|  | 307 | 607 | 907 | $190 \%$ | 1507 | 1807 | 2107 |

The names of the 60 years of the cycle of Jupiter are the same both in Northern and Southern India They are as follows -

| 1 | Prabhava | 16 | Chitrabhana | 31 | Hemalamba | 46 | Paridhârm |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | Vibhava | 17 | Subhânu | 32 | Vilambin | 47 | Pramédn |
| 3 | Sukla | 18 | Tâana | 33 | Vikârın | 48 | Ananda |
| 4 | Pramoda | 19 | Pâthiva | 34 | Sarvart | 49 | Rakshosa |
| 5 | Prajapatı | 20 | Tyays | 35 | Plava | 50 | Anala |
| 6 | Angıras | 21 | Sarvajit | 36 | Sabhakrit | 51 | Pingala |
| 7 | Srimukha | 22 | Sarvadhârın | 37 | Snbhakrit | 52 | Kulayutka |
| 8 | Bhava | 23 | Virodhia | 39 | Krodhı | 53 | Stduhartha |
| 9 | Yuvan | 24 | Vikita, | 39 | Vıbwîvasu | 54 | Randra |
| 10 | Dhatar | 25 | Khara | 40 | Parâbhava | 5 | Darmati |
| 11 | Iswara | 26 | Nandana | 41 | Plavanga | 56 | F ndubhi |
| 12 | Babudhanya. | 27 | Vıaga | 42 | Kilaka | 57 | U0 |
| 13 | Pramathin | 28 | Jaya | 43 | Saumya | 58 | Fir'taksta |
| 14 | $\nabla_{\text {Vlirama }}$ | 29 | Manmatha | 44 | Sádbarana |  | Kr tha |
| 15 | Vrisha | 30 | Darmukha | 40 | Vurodhakrit | 60 | Kıb ${ }_{\text {cya }}$ |

As an example of the use of this Dakhin cycle, I may cite the date of the Kurda inseription (Royal Assat Sor Jour, III, 104), which 18 recorded as Sake 894 (AD 972), with the Jupiter year named Angiras As this is the 6 th name, we obtan the date intended by adding 5 years to the lst year of the cycle, which began previously to AD 972 This is A © 967 , to whel addung 5 we get 972 AD, in exact accordance with the Sake date of 894

TABLE XX.

## INITIAL DAYS OF ILAHI YEARS.

The Ilahi is a tiue solar year beginning with the Nauroz (in March) The initial days in the Hipra reckoning are taken from Dowson's Table as given by Abul Fazl The corresponding Christian dates have been calculated. and a few palpable exross have been corrected

| ILAHt |  | Months | A H | March | A | A D | Itahi |  | Moutha | A 7 | March |  | A D |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 27 | Rabi II | 963 | Tues | 10 | 1586 | 26 | 5 | Sofar | 989 | Sat | 11 | 1881 |
| 2 | 9 | Jumadi I | 964 | Wed | 10 | 1557 | 27 | 15 | $\cdots$ | 990 | S | 11 | 1682 |
| 8 | 20 | - | 985 | Thur |  | 1588 | 28 | 28 | - | 991 | Mnu | 11 | 1583 |
| 4 | 2 | Jumadi 11 | 966 | Frid | 10 | 1689 | 29 | 8 | Rabl I | 992 | Tues | 10 | 1584 |
| 5 | 12 | - - | 967 | S | 11 | 1560 | 30 | 19 | - | 998 | Thar | 11 | 1885 |
| 6 | 23 | - | 968 | Toes | 11 | 1881 | 81 | 29 | - | 994 | Thar | 10. | 1886 |
| 7 | 5 | Rajail | 969 | Wed | 11 | 1562 | 32 | 11 | Rabi II | 995 | Sat | 17 | 1887 |
| 8 | 10 | - | 970 | Thur | 11 | 1663 | 38 | 22 | - | 998 | Mon | 11 | 1888 |
| 0 | 27 |  | 971 | Sat | 10 | 1584 | 34 | 4 | Jumadi I | 907 | Tues | 11 | 1589 |
| 10 | 8 | Shaban | 972 | s | 11 | 1565 | 35 | 24 | - | 998 | Wed | 11 | 1590 |
| 11 | 18 | -- | 973 | 8 | 10 | 1568 | 36 | 24 | - | 999 | Wed | 10 | 1591 |
| 18 | 29 | - | 974 | Tues | 13 | 1567 | 37 | 8 | Jumadr II | 1000 | Thar | 10 | 1592 |
| 13 | 11 | Ramzâa | 975 | Wed | 10 | 1568 | 88 | 17 | - | 1001 | 5 | 11 | 1598 |
| 14 | 22 |  | 976 | Thur | 10 | 1669 | 39 | 28 | - | 1002' | Mon | 11 | 1594 |
| 16 | 2 | Shauàl | 977 | Frid | 10 | 1570 | 40 | 9 | Rajab | 1003 | Mon | 10 | 1595 |
| 16 | 14 | - | 978 | S | 11 | 1571 | 41 | 20 | - | 1004 | Wed | 10 | 1696 |
| 17 |  |  | 979 | Tues | 11 | 1572 | 42 | 2 | Shabdn | 1005 | Frid | 11 | 1697 |
| - 6 | 6 | Zulkada | 9 co | Tues | $110$ | 1575 | 43 | 18 |  | 1006 | Sat | 11 | 1598 |
|  |  | - | 981 | Wed | 10 | 1674 | 44 | 23 | - | 1007 | $\mathbf{S}$ | 11 | 1699 |
| 20 |  | $\longrightarrow$ | 982 | Thur | 10 | 1575 | 45 | 4 | Bamatin | 1008 | 8 | 9 | 1600 |
| 21 | 0 | Zildhida | 983 | Sat | 10 | 1576 | 48 | 15 | - | 1009 | Tues | 10 | 1601 |
| 22 | 20 | - | 984 | 8 | 10 | 1677 | 47 | $20^{\circ}$ |  | 1010 | Wed | 10 | 1602 |
| 23 | 2 | Maha ram | 086 | Tues | 11 | 1578 | 48 | 8 | Shawd | 1011 | Wed | 9 | 1608 |
| 24 | 12 |  | 987 | Wed | 11 | 1579 | 49 | 17 |  | 1012 | Frid | 9 | 1604 |
| 25 | 24 |  | 988 | Frid |  | 1580 | 50 | 28 | - | 1018 | Sat | $\theta$ | 1605 |

## TABLE XXI.

THE ABJAD.
A favourite mode of recording Higra dates is by the numencal values of the letters in some short phiase, or chronogiam, descriptive of the event commemorated This system 19 called $A$ byad, fiom the first four letters of the Hehrew alphabet, from which the scheme was boriowed, namely, a b,j, $d$. The whole scheme is as follows -

| Letters | Values | Letters | Valuen | Letters | Values |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $a$ | 1 | 2 | 10 | k | 100 |
| $b$ | 2 | $\boldsymbol{k}$ | 20 | , | 200 |
| 3 | 3 | 1 | 80 | sh | \$00 |
| $d$ | 4 | * | 40 | $t$ | 400 |
| $n$ | 5 | $\cdots$ | 80 | * | 500 |
| $0 n$ | 6 | $*$ | 60 | 4h | 600 |
| $t$ | 7 | $a, n$ | 70 |  |  |
| $h$ | 8 | $f$ | 80 | 2 | 700 |
| $t$ | 9 | $n$ | 90 | $2 m$ | 800 |
|  |  |  |  | $\Sigma$ | 900 |
|  |  |  |  | gh | 1000 |

Occasionally the chronogiams were very teraely and happily expressed, and the fortunate inventors wete usually rewarded veiy liberally The following are rather favourable specimens of these Abyad chronograms

1- Wafat Furoz records the "Death of Firoz" in A. H 790
2-Masjld Jami ul Shark records the bunlding of the Great Mosque at Jaunpur in A H 852
$3-A z$ atash murd, "he died by fire," recoids the date of the death of Sher Shah, who was killed p+ the siege of Kâlinjar by the bursting of a shell

4-Zawal Khusroan, or the "Ruin of the Kings," was invented by Ghulam Alı Hindu Shah, the fa 'Jer of the historian Ferishta, to commemorate the deaths, in A H 961, of the three kings,*

> Mahmud Shâh of Gnjazat
> Burban Nizfin Shah of Ahmednagar
> Islam Shak, Suz, of Delbi
s-Pul Muhammad Mı nom Khan, or "Bridge of Muhammad Muním Khan," at Jaunpui, gives the date A H 975

[^55]6 - In the old town of Hilsa in Bihâr, near the tomb of the holy Saint Jaman Madârı, there $1 s$ an upright stone with the date of A H 1013, recoided in four different ways, as follows *

| In Arabic | alf wa kuls $n$ ghr $=1000+3+10=1013$ A H |  |  |
| :---: | :---: | :---: | :---: |
| " Persian | havir wa nit dah $=1000+13$ | $=1013$ |  |
| , Numerala | 1013 | $=1013$ | " |
| "Abjad | d w b a zw z |  |  |
| Values below | $4+6+2+1+800+200$ | $\sim 1043$ |  |

The values of the Abjad letters ane engraved on the stone in numerals immediately below the letters


[^0]:    Every nation forma an ora from some remarkable evenl, such ws change in reltgion, - the acoceanton of ore family to the throne, upon the extinction or expulsion of another, great eartiquake or a flood -AHUL-FaEL.

[^1]:    * Indian Antiquaty, Vol XI, p. 322

[^2]:    * Sce miy account of the Seleukudan era in thie volume

[^3]:    * For these two ingcriptione of Jaika, moe my aocounts of the Gupta and Vikramíditya eras in this volume
    † Baber's Momoirs, translated by Eiskine, p 258
    Jervin's Woighta, Meatures, and Coins of India, p. 94, Cowajoe Patell's Chronology.

[^4]:    * So also in tine Surya Buadhânta, yi, 19, Variha Mihira apeaks of the year as a 'wheel
    $\dagger$ Wilmon's Rig Veda, II, 143, and aleo II, 131

[^5]:    * Whlson's Rig Veda, I, 65
    $\dagger$ History of Anclent Sanskrit Laterature, p 212
    $\ddagger$ Dr Kern s Iranslation of the Brihat Sanhita, C vin 24
    s Yajuavalkya also [C 11, b] alys, that a petitiou made to the king should give the year, montb, half month, and day
    \Vita Alexandri, C vil, 9 "Menses in quanos denos descripserunt dien anni plene apatia servant Lunæ oursu notent tempora, non, ut plerique, oum orbem adus implevit, sed cuin se curvare ccept in cormus"

[^6]:    "Abul Fanl, Gladwin's Translation of Ain-1 Akbarr, I, 266, givee these three namea, and aignifioantly adde, "throughout Hindustan taey do not reokon more then three mosmons of the jear."

[^7]:    - Beinand, Fragments Araber ot Pernaus, p 147
    + Raja Tarangini, 1, 62

[^8]:    * Gledwn's Ain-i-Akbari, I, 263 nee also II, 8891
    $\dagger$ This namber should be 4801 , or $4696+105$, and not 4881 .

[^9]:    * Raja Taranginı, I, 56
    $\dagger$ Raja Turangni, I, 51
    $\ddagger$ Reinaud, Fragments A rabes et Persaus, p 197
    § Vishnu Purana, IV, C. 24, or Hall's Edition, Vol. IV, p, 389

[^10]:    * Wilmon's Viahnu Pusana by Hall + Colebrooke's Essays, II, 313-14-10,

[^11]:    - Colebrooke' Essays, II, 313

[^12]:    $\dagger$ Bemand, Fragments Arabes et Perans, p. 147

[^13]:    - See Colebrooke's Resays, II, 814 and 318.

[^14]:    * Belsaud, Fragmenta Arabee et Permans, p 140

[^15]:    * Remaud, Fragmorta Arabes et Perana, y 146

[^16]:    * Warren's Kala Sankâlita, p $199 \quad \dagger$ Prınsep's Useful Tables, p 27.
    $\ddagger$ Datis in Asiatio Researchea, III, p 78

[^17]:    - Bengal Abiatio Society 8 Journal, XXVIII, pp 45
    + I have aince found an ansoription dated in Vikrama Baka.

[^18]:    * Bee Arohmological Survey of Indar, XI, 126
    $\dagger$ Tibetan Grammar, p 195, Prineep a Useful Tables, p 30, quotes Ceoma, Bengal Ashatio Society's Journal, III, 6, but the passage as not there

[^19]:    * For the former, 把 Abiatic lieseurches, III, 217, and for the latter, the Kila Sunkâlıta, p 197
    $\dagger$ Sce Archmological Sarvey of Inda, Fol X, Appendiz

[^20]:    "Saptaryabda sato ekâdasa bhagaıh panchabhna adhike gate Gurn yukta Nakshatra mấa samytua cuasha dnayumâdhakam bhavatı"

[^21]:    - Kala Sankulita by Colonel Warren, p 298.
    $\dagger$ Imedun Ant ${ }^{\prime}$ quay y, 1882, p 271

[^22]:    * Julıon's Hwen Theang, II, 395
    $\dagger$ Record of Buddhastic Kingdoms, translated by Giles, C vis

[^23]:    * Academy, 19th March 1881, and Indian Antrquary, May 1881, p 153
    $\dagger$ See Burnouf

[^24]:    * Dr Stovenson's Kalpa Sutra, Preface, p via, and note, p 96.
    $\dagger$ Dr Bhau Dajı, Bombay Absatio Sonety в Journal, IX, 149
    $\ddagger$ Royal Asiatic Sicrety's Transactions, LII, 958

[^25]:    - Fanti Rellenion, III, p 311
    † Ordo Beoloram, by Henry Browne, Pp 487 and 488 Bee also Fanti Hallanioi, III p. ${ }^{378}$

[^26]:    - Clinton, Fasti Hellenloi, III, p 353
    $\dagger$ These proofa are taken from Browne's Ordo Saclormm, p. 461

[^27]:    * Cownesjee Patell, p 26, of oourge copies Prineep. † Ordo Smolorum, p 461

[^28]:    * Thid coin is engraved in Longgeriers anpubhithed book un the Parthan comage, Plite XIV, Fig 9

[^29]:    - Bactrian Coins and Indian Dates, in Lloyal Asiatic Souliy a Journal, New Series,

[^30]:    - See 2 Maccabeer, XI p 21
    $\dagger$ Clinton, Fasts Hellenici, I, p 336
     at the end of February of Greeke as well as Romane

[^31]:    * Ashyrian Inscoveries, $p 189$
    $\uparrow$ Clinton, Fasta IIellenici, III, 360
    $\ddagger$ Bee Numumatic Chromucle, New Serles, 1868, p 257

[^32]:    * Remaud Fragmenta Draber et Persana, pp 145146

[^33]:    - Induan Antrywary, VoI XII, p 155
    $\dagger$ Ibrd, Val. V, p 114.

[^34]:    - Dr Bhan DAjr, in Bombay Aeiatio Socrety's Jouraal, Vol VI, 29-30
    $\dagger$ Bee Prineep's Useful Tables, p 82, where the origin of the error is pointed ont.
    $\ddagger$ Colebrooke's Eesays, Vol II, p. 264.

[^35]:    * Archmologionl Survey of India, Vol X, Appendix.

[^36]:    * Budha Gupta'n insoription on tho Pillar at Eran baars the date of Sainvat $16 \mathrm{~g}_{\mathrm{n}}$, Thuredany, 12th Arhedha-Sudi.

[^37]:    * See Archacologional Survey of Indsa, Vol X, p. 125

[^38]:    *Induat Antiquary, 1873, p 312 Noten by Mejor Watmon

[^39]:    * Renaud, Fragmenta Arabes et Perana, p 139
    $\dagger$ See Archæological Survey, X, 101, for other aneriptions of Bhoja Deva, Gpalior A D 876, and Deogarh AD 862 The Raja Tarangini aleo places him between 883 and 901 A D
    $\pm$ Jodian Antiquary, Vol. IX, p 169, et afq

[^40]:    * For the first plate, soe Bengal Asintio Society s Journal, XXXIII, 321, and for the mecond plete, see the same Jounnal, XVII, 71

[^41]:    * Woothonse's cocount of the Eijra Ere Will be found in "Weighta and Maesuren of will Itations,"一 Weale, 1868.

[^42]:    - Brown's Cyolio Tables, pp 2, 67.

    4 Boysl Andatio Society's Journal, IV, 14 .

[^43]:    * Prefaoe to the Digest of Indian Law--Easaya, I, 472.
    † Buchanan's Eastern Indis, III, 41 and 189

[^44]:    * Notioes of Sanskrit Manusoript, III, pp 134, $14 \theta$
    † Bengal Asuatio Society's Joarmal, 1868, p 187.
    $\$$ Eintern India, III, p. 806

[^45]:    - Bengal Absatio Society's Journal, Vol. V, p. 657
    + Ibia, 1878, p. 896.

[^46]:    * Benfel Aciatio Sooity's Jourmal, 1878, p. 898.

[^47]:    - Jamen Pringep givee 11 th April $\$ 856$ ee the 1 st of Vaisthh, but this is clearly a mistake, as his own Tablen give the mame date for the beginning of the Faali jear in 1886. - Unoful Tables, pe 26

[^48]:    * Niz\&muddin in Elisot's Mnhammadan Hastorians, $\nabla$, p 241
    $\dagger$ Numismata Orientalia, Vol IL, p 640

[^49]:    - Blochmar i's Aid-1-AEbari, p 105

[^50]:    

[^51]:    * Colebrooke's Essays, II, p 264 He has used the elroneous equation of 50 Instead of 57 to reduce the Sampat year to Christian reckoning

[^52]:    6,910 days in 19 years *The stary desote leag years of Julan reckoning

[^53]:    † Agrahavana oinitted，and Kâruka intercalary
    $\ddagger$ Yausha omitted，and Ybalguna meroalars．

[^54]:    

[^55]:    * Buges Ferishta, Vol IV, 152 Islam Sheh died wathin a few days of the end of A H 960

